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MARYLAND AGRICULTURAL FAIR.

THE FOURTH ANNUAL EXHIBITION.

A GRAND SUCCESS.

The Fourth Annual Exhibition of the Maryland State Agricultural and Mechanical Association began on Tuesday, the 8th of October, 1872, and continued for four days, on their grounds at Pimlico, near Baltimore city. To say the very least, it was a great success. The weather was propitious and the arrangements perfect, except in the important particular of convenient and cheap conveyance of visitors to and from the grounds. This was, however, better than in former years, and will be remedied as soon as the horse-cars are started on the new road now being made, and the Western Maryland Railroad finishes its Baltimore connection. Much credit is due to the officials of the Association, and particular mention should be made of the prompt discharge of the multifarious duties of the Chief Marshal, Mr. R. F. Maynard, and also of the taste displayed by Mr. Brackenridge in the arrangement and ornamentation of the Floral Hall.

The number of articles and stock was not as large as was expected, but what was offered for exhibition was choice and select. We would gladly notice each class and each offering, but neither time nor space allow. We shall therefore merely mention those objects which caught our eye as prominent features in this really splendid Exhibition.

HORSES.

There was a fine exhibition of these beautiful animals. Among the most prominent were the Percherons of Mr. Walters, and that splendid specimen of the draft horse, Col. Ficklin's gray stallion (who made the Indians stare and grunt their wonder and admiration), and by way of comparison, Col. Jenifer's beautiful white Arabian, all

grace and agility — like an Adonis in a ball-room, yet with the eye and step of a chieftain on his native heather.

CATTLE.

The show was large. Mr. Coffin's herd of Durhams was admitted to be unsurpassed by a like number in this, or might we not say, in any other country. Mr. Brown's 70 head of lovely Devons were the great attraction to all lovers of beauty in the bovine race. The Devons are certainly very beautiful, and taken all in all, are the most desirable for our region with our neglectful system of husbandry. We were gratified to see the Committee awarded the blue ribbon invariably to the dark maroon color, where it came in contest with the lighter shade, all other things being equal. In our judgment, Mr. Patterson made the only error he ever made, in breeding Devons, when he yielded to the temporary English fashion of giving a lighter color to the Devon. The maroon red is the natural color of the Devon and should be adhered to. There were many choice Alderneys exhibited by Messrs. Garrett, Jenkins, Reiman, Baker and others, and were much admired. We regretted to see no Ayrshires in the stalls. Mr. J. Merryman, as usual, swept the platter with his fine herd of Herefords. There were some fine grade of native cattle shown, among which were the cows of Mrs. George Brown, and a huge steer, owners name not now recollected.

SWINE.

The number of swine was small, but fine. The Essex and Berkshire were prominent and attracted great attention. They are certainly wonderful improvements on the old time "land-pikes." As we heard an old farmer observe on looking at some of them, we say, "*I tell ye, them's hogs what is hogs.*"

SHEEP.

Not many sheep, and it was strange there were so few. Everybody likes to see fine sheep. What

there was would have done credit to any show. The Cotswolds of Mr. Murphy, were magnificent. The South Downs of Col. Jenkins, and the Shropshires of Mr. Merryman, were splendid specimens of those popular breeds of this useful animal.

POULTRY.

The display was very large and creditable to the skill and taste of the exhibitors. Every variety of barn-door fowl, and pigeons in crowds were there. This department was thronged all the time with delighted spectators; the ladies seemed to take great delight in seeing the great bronze turkeys, large geese, and beautiful ducks; the grand Eastern Fowls, and the gold and silver laced Bantams, like proud little dandies, strutted, while the warrior Games, brilliant in plumage, crowed defiance. The Poultry was a marked feature of this capital Exhibition. The show of pigeons was very beautiful, and showed careful breeding by the accuracy of the marking of their feathers. The wonderful carrier pigeon was there with its intelligent eye and ugly excrescence on the bill. We wonder if that marked feature in this bird has anything to do with its instinctive power of memory, or that faculty which enables it to return direct to its home after a travel of 2,000 miles.

MACHINERY.

This department reflected great credit upon the machinists of our country, and had its full share of the public attention and public applause.

TRIALS OF SPEED.

This was an attraction to thousands, and to none more than to the female portion of the crowd. The Association would do well to arrange another year to have more and larger premiums in this Class. There can be no better way to encourage improvement in breeding this noble animal. Without the horse mankind would suffer numberless inconveniences, and therefore it stands at the head of all the animals subject to man, and should receive a corresponding consideration. Wonderful has been the advance made in breeding and training these intelligent creatures, and it is to be hoped that the progress will be stimulated by Agricultural Associations, in the future, by high rewards for not only the exhibition of their beauty, size, etc., but for the exhibition in rival contests of their strength and speed, and other accomplishments, evidencing the patience, skill, and judgment of their owners. Large purses will attract the best horses, and draw a bigger crowd than either orators or

WILD INDIANS.

Thousands were attracted by a large company of Indians who were marshalled in all their gaudy dressing of paint, feathers and jewelry, around the grounds by Jos. H. Reiman and Col. S. S. Mills.

It was a sight to be sure to see the red skins eat. A looker on might well think each of them was a starved Boa Constrictor. They bolted fish, flesh and fowl, bread and vegetables as if they eat for a wager! What a people! What a bother, and what an enigma are both the red and the black man to the white race just now! Nature herself seems to have erected a barrier irresistible against any social equality or fraternizing between the red, white and black races of this world.

FLORAL HALL.

This was emphatically a Floral Hall. The display of flowers and plants, of vegetables and fruits, were very fine and creditable to the State; needle-work and preserves, wines, cordials, pickles, bread and cake, and specimens in every department of life where woman presides, were abundant, and reflected high credit, and the highest meed of praise was lavished upon our cherished matrons and their beauteous daughters. It was a proud sight for a Marylander to behold these evidences of home industry on the part of our ladies. It would be an invidious task to designate any one article where all were so excellent; had we been on the Committee we are sure we would be sipping and tasting yet, and never come to a conclusion, but there was a display of preserved fruits in a number of small jars, that must have made glad and happy the heart of the young lady's father. The harness and leather manufacturers were well represented by Messrs. Hammond and O'Brien, of Baltimore, and R. Kneessi, of Washington City.

RUSTIC FURNITURE.

Mr. Colter Bride made a handsome display of Rustic Furniture, and increased thereby the growing taste for such ornamental adjuncts to the beauty and comforts of country places.

MISCELLANEOUS.

The case of silver and plated ware, deposited by Messrs. Canfield & Co., of Baltimore, was beautiful, and attracted the gaze of bright-eyed beauties.

There were several Cotton plants in different stages of growth, and also was exhibited superior specimens of the *Rice* plant, six feet high, and loaded with heads of rice, beside some cleaned for market. This was a novel sight in Maryland. These samples were taken from 1800 acres of gold seed rice raised by *J. B. Bissell, Esq.*, Combahee river, S. C.

Messrs. Gillmore & Bro., Commission Merchants of Baltimore, exhibited, as a curiosity, some half dozen hen eggs as round as billiard-balls, and very large size.

The gardener of Mrs. George Brown showed a case of 20 varieties of superb and luscious hot-house Grapes.

The products of *Iowa, Nebraska, Dakota, Montana and Minnesota*, comprising many varieties of the cereals, cotton, vegetables, fruits, minerals, coal; large blocks of the natural black, rich soil; curious and valuable varieties of corn, rye and oats, altogether making up one of the most interesting and instructive portions of the Exhibition. It showed the wondrous productive power of our immense country. It was an epitome illustration of the capacities of the far and almost unpeopled West for the production of every fruit, vegetable and grain required for the sustenance and luxurious living of the human race, with the addition of a healthy climate and a soil inexhaustible in fertility. This attractive space of the Hall was in charge of Mr. P. W. Wilcox, travelling Agent for the Land Department of the Burlington and Missouri R. R. Co.

MARYLAND FARMER OFFICE.

We cannot close this brief notice of the grand State Fair without saying that our enterprising Proprietor had an office neatly fitted up and ornamented so as to challenge attention, and behind the scenes our patrons, both gentlemen and ladies, found at all times something nice wherewith to appease their hunger and exhilarate their spirits. The Association is now for the first time on a solid foundation, and having its sails filled with the breath of popularity, it can go on to increase its influence for the advancement of Agriculture.

At two o'clock on Thursday, the Hon. Horace Greeley was introduced to an immense throng of listeners, to hear the Philosopher speak of what he knew about farming. He was escorted to the orator's stand by a number of prominent citizens, among whom were Hon. Montgomery Blair, Hon. James T. Earle, Hon. John Merryman, Jos. H. Rieman, Esq., and the Committee of Reception of the City Council of Baltimore, and others. After a national air by the band, Geo. S. Brown, Esq., president of the Association, introduced, in a few appropriate remarks, Mr. Greeley, when he delivered the following

ANNUAL ADDRESS.

Mr. Greeley began by saying that what he had prepared to say to the farmers of Maryland, on this occasion, was written out, and would, perhaps, be read in the papers, if any one chose to read it, but before reading he would say a few words in a plain way. At this day, when the torch of science lights up the highways and byways of labor, the farmer should understand the science of his labor. By that I mean he should understand not only the mechanical force which is applied to produce a result, but also the laws of nature which are brought into operation to effect it. The smelting of iron, the propelling of a vessel by steam, require a knowledge of these laws, and the farmer cannot expect to cultivate his land in the most profitable and useful way without the light of science shining on him, and, through him, on his fields and woods. I do not, said the speaker, say that a man cannot become a farmer, and even a successful one, without science; but what I do say is he will be a better farmer for his knowl-

edge of the laws of science. The farmer is told to apply lime and he does it, plaster and he does it; but he should understand that there are certain lands to which the one is properly applied and the other is not. For instance, those lands which grow sour weeds, as sorrel and seamash, those lands which are acid, require lime, while other sorts of land require plaster. When the ammonia in the air, passing over a field, has a stronger affinity for sulphur than the lime has, the former absorbs it and assimilates it. In using lime the farmer should know whether to use the oyster-shell lime or the lime quarried from the rock.

STEAM CULTIVATION.

The time is coming when all the land in the country will be cultivated by steam; not only the ground plowed by steam, but the grain cut and delivered in bags by steam, which the farmer will gather up as he walks behind the machine. What I am trying to do, said Mr. Greeley, is to make you farmers look ahead. Why, there are now ten steam engines used in cultivating land in Africa to one in this country, and we ought not to be behind Africa. With these and similar prefatory remarks the distinguished orator began his address, as follows:

PROFITABLE FARMING.

Mr. President, Ladies and Gentlemen: That I take the renovation of worn-out soils as my text on this occasion will, I trust, be regarded as no special reflection upon the agriculture of Maryland. For such soils may be found in every one of our older States, and in almost every country where exhaustion by culture is possible, unless China and Japan supply exceptions. To wrench from an arable field whatever of food-forming material its soil contains and will readily yield, then repeat the same process on another field, and then another, is the barbarian's natural method of swindling nature out of a scanty, precarious livelihood, whenever game has become too scarce and shy to supply him with needful food. It is a simple repetition, with the inevitable modifications, of the process by which his progenitors rendered hunting for a livelihood no longer productive or even possible. To destroy without reproducing, to live this year so as to render living next year more difficult, to exhaust or dry up the fountains whence life and strength have flowed sweetly and bounteously, are the barbarian's heedless methods, from which many of our people are not yet emancipated. I have seen in New England a field which once bore good wheat sown to rye year after year, till its crop had steadily dwindled to five bushels per acre, when it was thrown out of cultivation and given up to sorrel and mullin, with the sage observation that it washed badly, and so had become good for nothing! Yet that field sloped gently to the south, and, if well subsoiled and then plastered at a net cost of ten dollars per acre, would have produced a good crop of clover immediately. The husbandry that had wrought its ruin was simply barbarous, though those who tilled it knew how to read, write and cipher, and were grossly ignorant of nothing but the art whereby they were trying to live.

"POOR MEN AND POOR CROPS."

I protest, at the threshold, against the current notion that poor men must grow poor crops, unless they have taken some monkish vow to remain poor forever. Here is one who has inherited or somehow acquired a cot and a few sterile acres, but has no money, no team, no fertilizers; what shall he do! I answer, whatever he may do, let him not cultivate one acre more than he can so feed and till as to give reasonable assurance of a good crop. Far better work out by the day or month than to waste your time and strength on cultivation to no purpose. Let him have one acre plowed and subsoiled thoroughly, fertilize it amply, set a few fruit trees along its north side, and make each square rod do its best in the production of roots, vegetables and Indian corn, while working out by the day four or five days in each week and six days during the hurry and high wages of the summer harvest, and he will get ahead much faster than by half tilling ten or fifteen half plowed, niggard, unmanured acres, and thus growing what will range, according to the season, from scanty half crops to no crops at all. And, if you tell me that he can find no one to hire him, I say, then let him pull up stakes,

"GO WEST."

and keep moving till he finds some region where honest work may be readily exchanged for honest bread.

One of the first elements of successful renovation is a law, such as we have in New York, and I trust in most old States, compelling every man to take care that his animals do not injure his neighbor's crops—in other words, that we must thoroughly fence our respective cattle yards and pastures, not our whole farms. The saving in fences thus effected is immense; but that is only one of its blessings.

I value above this the liberty accorded to each of us to grow wood on our own lands wherever we will, without being obliged to fence out our neighbor's cattle, especially while roaming in ravenous pursuit of food in early spring.

If you mean to renovate your farm, begin by throwing out the acres you cannot fertilize for some years ahead, and cover these with wood so soon as you may. Gather or buy nuts and seeds, plant them in your garden, and transplant the young trees to the crests of your ridges, the sides of your ravines, when barely a year or a year and a half old, and keep setting trees till all the land you cannot fertilize and thoroughly till is covered with thrifty timber. The very first step in renovation to the average farmer is to limit the area on which labor and capital must be bestowed.

DEEP TILLAGE.

If I insist on deep tillage as essential to good farming, you will understand that this, like every sweeping rule, is liable to exceptions. For, 1. There is much land too rocky, too precipitous or too sterile to be cultivated at all; and, 2. There is good land so full of stumps or strong tree-roots that it should be got into grass as speedily and cheaply as possible, thus to remain till it may be thoroughly pulverized without injury to team or plow. But any field that is to be cultivated heucelorth, continuously, or by frequent alternations of grain with grass, ought to be plowed deeply and thoroughly, both surface and subsoil, as a preparation for profitable tillage. Mind that I say subsoiled, which means pulverizing the subsoil and leaving it subsoil, not turning it up to the surface and leaving it there. I think I have seen even this done with profit, especially where the subsoil is clay, with several inches of sandy loam above it; but subsoiling is quite another process—one very generally required—while, up to this hour, not one acre in each hundred under cultivation in this country has ever been subjected to it.

HILL-SIDE PLOWING.

I cultivate steep hill-sides of sandy or gravelly loam which, but for subsoiling, would wash fearfully in every violent shower, sweeping away their finer particles to be lost forever; subsoiling prevents this, by presenting a deep, loose, porous soil, into which water falling on the surface sinks rapidly, and much of it remains in the subsoil till it is needed and drawn upon by the growing plants above it.

FERTILIZERS.

As to fertilizers, I place gypsum or plaster first on the list, without supposing it to be of equal value everywhere, or even of any value under all conceivable circumstances. And yet I doubt that a hill or dry plain can be found ten miles inland on which a first application of plaster, to the extent of 200 pounds per acre, would not be repaid in the very next crop, more especially if that crop were clover.

Wherever ground plaster may be had for less than \$36 per ton (as it can be in most parts of the Union), I hold that each farmer who has not yet tried it, should buy at least one ton, apply it to ten acres in strips of two rods' width, alternating with a like breadth left unsown, and carefully watch the result. If no benefit is realized he may safely conclude—not that plaster is a humbug—but that his land does not need it, or that he has not known how and when to apply it. In my own case, I judge that I have bought no other fertilizer that paid so amply and speedily as plaster.

As to lime, I am not so confident. In any district where it is burned, so that the refuse from the kiln may be bought, unslacked and scarcely yet cold, for a few cents per bushel, there I cannot doubt the profit of its application to almost any dry soil, but especially one well supplied with vegetable matter—a drained bog or swamp, for example. The English apply it profusely to heavy clays to break them up and render them friable; and they would not persist in so doing without reason. Wherever the spontaneous growth of sorrel and other acid plants indicates a deficiency of alkali, there I judge that lime would prove serviceable.

If unleached wood ashes could be had as cheaply, I would much prefer them, especially on sandy or gravelly soils; but, as no sensible cultivator of such soils ever sold his ashes, they are rarely to be had in considerable quantities, except in the immediate vicinity of one of the few cities or larger villages which still relies mainly on wood for its fuel. I consider every bushel of ashes from wood burned within doors worth to a farmer half the price of a bushel of corn, since, by judiciously applying it, he may increase his corn crop bushel per bushel. As to lime, I regard well-burned oyster shells as worth to the farmer twice as much by weight as the average of lime quarried from a ledge, though this is quite diverse in quality.

Where it is mingled or heavily charged with magnesia its agricultural value is slight, if not questionable.

Yet plants need lime, feed upon it, thrive by it; and I have known large crops of wheat grown successively on a field whereof the soil for at least two feet downward was at least nine-tenths broken limestone, resting on a solid bed rock of that same. I apprehend that lime is destined to play a very important part in the renovation of our worn-out farms, though it may never be used so bountifully here as in England. The late Prof. Mapes calculated that, since mineral particles act on vegetation only by their surfaces, and our lime is many times finer than the British, an application of 50 bushels per acre here was equivalent to one of 250 bushels of that burned from the coarser chalk of the British Isles.

SALT AND SALT WATER.

I have a very high opinion of salt as a fertilizer. It may not be wanted near the coast, where a saline spray is often driven inland for miles; but I estimate its value at 25 cents per bushel on my place, which is some twenty miles from Long Island Sound, and nearly twice as far from the broad ocean. That is to say, I consider ten bushels of salt per acre, applied to my fields one half in each of two successive years, about the best \$2.50 worth of plant food that money will buy me. And almost any farmer can obtain refuse salt from importers, manufacturers, tanners, repackers, or grocers and dealers who buy salt meats or fish by the barrel and sell them out by retail, if he will but inquire and be patient. I could always buy all I wanted in New York at or below fifteen cents per bushel, and I have had a car-load at a time given me by one who had no use for such salt, but urgent need of the room it occupied. Such wind-falls come every year to those who are looking for them.

One of these days (but not in *my* day) we shall have great pumping works beside our harbors, sounds or inlets, lifting sea-water by the thousand gallons up to a height whence pipes or tubes will convey it, aided only by gravitation, to plains and valleys far inland, which it will be allowed gently to overflow, irrigate and fertilize. If, after a time, fresh water shall be deemed desirable in its turn, then the salt of the sea-water will be precipitated on its passage by some cheap chemical agency, and only the thus freshened water reach the soil.

PHOSPHATES.

The prominence given to phosphates and to phosphatic substances, in our day, is fully justified. In rude ages, when cultivation was desultory and crops scanty and capricious, while animals decayed where they died and bones were thrown anywhere so that they should not be in the way, there was little need of applying phosphates to the farmers' fields and no call for them. At length all is changed.

For half a century England quietly bought up the bones of all animals that died or were slaughtered on or near our seaboard and applied them to the fertilization of her fields, while our farms, through the sale of milk and of living or slaughtered animals, were steadily losing all that hers were gaining. When we, at length, awoke to the suicidal madness of this display of ignorance and heedlessness on our part, we had to recover the leeway thus made; and I have no doubt that we had, and still have, meadows and pastures which would still give fair crops of grass, but on which a sound-boned, strong ox could with difficulty be reared. Hence the policy and necessity of applying phosphates in some form to the well-worn fields of our older States—a necessity which is not at all felt in newer regions and on virgin soils.

FARM-YARD FERTILIZERS.

As to the ordinary farm-yard manures, no one need be told that they are excellent so far as they go—that he is fortunate indeed who can obtain them in abundance and at little cost. They contain in available form most of the ingredients required by ordinary soils to fit them for producing excellent crops, or, more accurately, they embody most of the elements of plants in such form that plants may readily absorb and thrive upon them. You may have them in abundance, yet still need certain mineral additions to your soil—lime, sulphur and phosphorus especially—but a very small outlay will suffice for all that you need of these if you have in abundance farm-yard manures, so that these be well rotted and wisely applied. He who has these where they ought to be can soon buy and pay for all else that he needs.

But the farmer who can apply cords per acre from his barn-yard to ten acres per annum of his farm is a marked exception. There are more who could not deal with one acre per annum thus generously. For, while manure is the life of the farm, nothing else is treated so wastefully. Thrown out to be drenched by water from the eaves, then

bleached in the sun and burned by internal fermentation, most farmers treat it as a nuisance rather than as their most essential resource. We must change all this if we are ever to see our farms what they should be.

I have a paved cellar expressly for manure under the entire cattle-floor of my barn, with a floor and scaffold above for my hay and grain. This is very convenient, but not entirely satisfactory, while it cost more than the average farmer can afford. I recommend to him the following substitute:

HOW TO DO IT.

Dig out the centre of your barnyard to a depth of six or eight feet in the middle, making it a pit or hollow, with regularly sloping sides. Raise the outer residue of the yard with the earth so excavated, so that water can never stand anywhere else than in the hollow. Mow all the weeds and brakes you can find in the roads around you, in your own fields first, then in those of your neighbors who will let you; gather dry leaves wherever they are not needed, and litter your cattle generously, alike in stable and yard. Cut your straw and stalks if you can, and let everything that remains uneaten be quickly transferred to the pit. Devote at least a week in the fall to the collection of litter of all kinds, and make the week a month if you can possibly spare the time.

No labor on the farm pays better than that which is devoted to increasing the size while improving the quality of its muck-heap. If your soil is sandy or gravelly, and a pit or bank of clay is convenient, one hundred loads of simple clay per acre may be spread over your grass-lands late in the fall or early in the winter with profit, while clay soils are in like manner improved by a dressing of sand or fine gravel by loam. Fill up any hollows or depressions by thus coating clay with sand and sand with clay, and large crops will respond to your persistent, wisely directed efforts. Of course a whole farm cannot be thus thoroughly treated at once; but get a few acres into perfect condition each year, lay these down to grass, and proceed with the next lot, and your whole farm will soon be a model, alike for facility of working and certainty of ample harvests.

UNDERDRAINING.

I am writing for poor men, who do not admit that they should therefore be poor farmers. The rich can buy fertilizers right and left, underdrain, subsoil and till to perfection; but I address the thousands whose will is good but whose means are scanty, who cannot afford to "branch out," but must make each year's savings pay for the next year's improvements. To tell one of these how he might profitably spend several thousand dollars forthwith on his farm is only to annoy him; he has not the money, cannot borrow it, and can spare nothing wherewith to buy it. So I have said little of underdraining, because that now costs at least \$100 per acre, and is not in order, except on a small scale, until the farm has been made productive and profitable.

Let the farmer of scanty means improve the first dry autumn to underdrain thoroughly his wettest, boggiest acre; when thoroughly dry, let him sweeten this by a liberal application of lime, and, thoroughly pulverizing its soil, note well the two or three succeeding crops, and I think he will be convinced (as I am) that *underdraining pays*, at least wherever it is undeniably needed. Underdraining dry upland will come far later, and, as to many farms, may never come at all.

With irrigation the case is different. Doubtless generations will pass before our fields are blessed by that universal irrigation by the help of wells pumped by wind power, which I thoroughly believe in. That must come slowly, gradually, in ages, not years merely, and will not be hurried. Let me speak only of what is practicable and advisable to-day.

Most farms are traversed or skirted by some sort of brook, runnel or tinier water course, which may be dry for a part of nearly every year. Each is fullest in spring, when fed by copious rains, and often by melting snows also. Its current is of course richest in plant-food just when most ample. A slight dam thrown across its channel near the upper side of farm or field, with a mere furrow run diagonally thence through the field or fields below, so as to lead the water gradually away from the brook-bed, escaping across the lower bank of the shallow ditch at intervals until the last drop has been used to moisten and enrich the soil through which it filters down to its natural bed—such is a rude outline of a very rude device for doubling the crops while increasing the permanent fertility of a larger or smaller portion of almost every farm.

Of course the mode must be varied to adapt it to the volume of the stream, the lay of the land; but any intelligent farmer will know how to avail himself of the topo-

graphy of his freehold so as to insure him the largest increase of product at a moderate, perhaps inconsiderable cost. I am confident that our country's annual harvests might be largely increased by irrigation, with an annual profit of ten to twenty-five per cent. on the total outlay or cost.

THE QUESTION OF COST.

I need not say that this question of cost is one that the average farmer must continually ponder. He would like to do and to buy many things that he cannot afford—at least, not yet. The need of improved and more effective implements of husbandry is forever staring him in the face. Mowers and reapers, tedders and horse-rakes, stalk-cutters, feed-steamers, &c., &c., are all good in their place; but he cannot yet pay for half of them, while he must produce and sell in free competition with those who possess and use them all.

Of course he must give more labor for every bushel of grain, each ton of hay, than his forehanded neighbor does; and this disparity the progress of invention is steadily increasing. It is this rather than the inferiority of our soils that is carrying the grain-fields of our country farther and farther West. Minnesota and California did not average twenty bushels of wheat per acre last year—did not average, I believe, so large a yield of this foremost of bread-grains as Pennsylvania and Maryland did—but the former States grew their crops mainly on vast plains or prairies, by the help of the most efficient machinery, which enabled their farmers to pay high wages and yet realize fair profits. We, too, must ultimately use steam and the most effective machinery, or submit to be driven out of grain culture almost entirely.

FARMING ON THE SEABOARD.

Do I hold, therefore, that our seaboard farmers must abandon the goodly region in which they were born and follow the Indian and the pioneer on the paths which point ever toward the setting sun? By no means. A part will do this; let them be waited on their way by our heartiest good wishes, our fondest prayers. But a large fraction of our sons and daughters will remain by the graves of their fathers, and till the fields on which their eyes first opened. These, too, must have bread-corn; and I distrust—nay, I dispute the wisdom of obtaining this wholly from distant growers. An individual, a family of cultivators may do it with advantage; I doubt that a whole community of fifty thousand farmers ever did or will. A mining, a lumbering region, is apt to have an unusual proportion of its inhabitants living from hand to mouth; I doubt that an exclusively tobacco or cotton-growing country can be found which does not present a similar social aspect. Diversity of employment is essential to general thrift; rotation of crops is vital to the healthful vigor of the soil, the prosperity and thrift of its owner and tiller. I do not say that no considerable community ever thrived by making gimlets or growing hemp exclusively; I do insist that any such exclusive devotion to a single pursuit must ever prove, in the average and in the long run, mistaken and pernicious.

Let the South grow her cotton, the Northwest her wheat, the mid-West her Indian corn, but let each steadily enlarge and diversify her range of production, and let the Atlantic seaboard show what may be done by a system under which grain, grass and fruit are annually grown on the same little farm. If no grand successes, no brilliant hits, are possible under this economy, it is evident that great disasters, signal failures, must likewise be rare, since the deficiencies of one crop will usually be balanced by the excellence of another. Upon large fields, entirely freed from stones or other impediments to thorough culture, and brought up to a high standard of fertility, Indian corn, oats or rye, clover and the best grasses may now be grown in proper rotation with profit within two hours' ride of either of our great Atlantic seaports, where fruits, roots and vegetables are usually preferred, therefore probably grown at still greater profit. I speak from experience, and know that I am not mistaken.

VALUE OF "BARRENS."

Nay, more. Any man of ample capital and fair knowledge of agriculture may buy a thousand acres of the sandy "barrens" of Long Island, New Jersey, or the Eastern Shore of Maryland, and, leaving alternate strips of a hundred acres in forest, which are to be gradually reduced to squares of ten to forty acres as the residue is brought under tillage, he may fertilize each acre that he tills until it will produce fifty to seventy bushels of corn per acre, and, feeding every bushel to animals reared for market, he may realize a large interest on his investment while maintaining and even improving the productive capacity of his soil.

Mind that I do not say he might not do better by devo-

ting his efforts mainly to the production of fruits and vegetables—that is an independent consideration—but I am satisfied by my own experience that barren lands may be rendered fertile, right on our Atlantic seaboard, grain and grass grown from each improved acre, and these turned into mutton, beef, pork and poultry, which, being sold, will yield a liberal profit to the farmer and enable him to sell off improved farms to poorer cultivators for more than they cost him.

In other words, I hold that millions of acres right about us, which have never yet yielded to civilized man any crop but one of firewood or charcoal, may be profitably cleared of its mainly stunted, straggling trees and bushes forthwith, made to produce \$100 worth per acre of food next year and every year thereafter, giving employment and subsistence to hundreds of thousands of workers, and that larger as well as surer profits may thus be realized than by mining for gold in Arizona or hunting for whales along the coast of Alaska.

CROWDING CITY AVOCATIONS.

If this be true, is it not truth of decided importance?—Our cities are overcrowded; we have too many merchants, too many lawyers, too many brokers; we do not lack capital, but our wealthy men know by sad experience that to lend is often to lose—that those who seek to borrow on farm mortgages are almost never ready to repay. I urge them not to lend, not to speculate, but to apprentice their sons to the very best of our farmers, rub up their own knowledge of agriculture, hire the best foremen they can find, and resolve to become farmers while abiding gentlemen.

Let those who already own fertile wild land improve it; let those who do not own, judiciously buy, and let each cautiously feel his way, destroying no timber without careful consideration, but planting with choice forest trees every acre that is not soon to be brought under tillage, and so proceed carefully, observantly, thoughtfully, to the full measure of that intelligent activity which, backed by adequate capital, rarely fails in any worthy pursuit and never in farming. There is scope and opportunity here for tens of thousands of our affluent young men now crowding into offices and counting-rooms which do not need them, and I commend to their recognition the fact that there is no other career so truly independent, so free from peril, so equitable yet chequered with a pleasing diversity of daily interests and cheerful cares, so full of noble opportunities, so shielded from sordid temptations and maddening distractions, as that of the educated, fore-handed, capable, clear-headed American farmer.

AWARD OF PREMIUMS.

Cattle.

Imported Jersey Herd Book Cattle.—For best herd, \$40, J. H. McHenry; best bull, \$25, W. T. Walters; for second best bull, \$15, J. H. McHenry; for best bull calf, \$5, J. E. Phillips; for best cow, three years old, \$20, J. W. Garrett; second best, do., do., \$15, J. H. Reiman; for best heifer in calf, \$15, J. H. McHenry; second best heifer in calf, \$10, J. E. Phillips; for best heifer, \$10, J. E. Phillips; best heifer one year old, \$5, J. S. Jenkins.

Jersey Herd-Book Cattle.—For the best bull, three years old, \$25, John E. Phillips, for Ivanhoe; for the second best three years old, \$15, Jesse Tyson, for Tycoon; for the best bull, between two and three years old, \$15, J. Stricker Jenkins, for Fairfax; for the second best, between one and two years old, \$10, Robert Moore, for Saladin; second, for the best bull, between one and two years old, \$10, James H. Reiman, for Young Davy; for the second best, between one and two years old, \$5, J. H. Reiman, for Jasper; for the best bull calf, \$5, Robert Moore, for Blots; for the best cow, three years old, \$20, Jesse Tyson, for Jennie; for the second best cow, three years old, \$15, J. Stricker Jenkins, for Calistro; for the best heifer, between two and three years old, in milk or in calf, \$15, Clark & Jones, for Rufi; for the second best heifer, between two and three years old, in milk or in calf, \$10, J. W. Garrett, for Lilly; for the second best heifer calf, \$10, J. W. Garrett, for Prince Philippe; for the best heifer, between one and two years old, \$5, J. H. McHenry, for Cuba.

Imported Devons.—For best bull, three years old, \$40, the President, S. T. C. Brown.

Devons.—For the best bull, three years old, for High Horn, \$25; for the best bull, between two and three years old, for Springfield, \$15; for the second best bull, between two and three years old, for Carroll, \$10; for the best bull, between one and two years old, for Sir John, \$10; for the second best bull, between one and two years old, for Dandy, \$5; for the best bull calf for Dispute, \$5; for the best cow,

three years old, for Betsy Taylor, \$20; for the second best cow, three years old, for Deer, \$15; for the best heifer, between two and three years old, in milk or in calf, for Lady Jane, \$15; for the second best heifer, between two and three years old, in milk or in calf, for Lady Ann, \$10; for the best heifer calf, for Careful, \$10; for the best heifer, between one and two years old, for Lady Alice, \$5; best Devon herd \$40, S. T. C. Brown.

Herefords.—For the best bull, three years old, \$25; best bull calf, \$5; best cow, three years old, \$20; second, three years old, \$15; best heifer, between two and three years old, in milk or in calf, \$15; second best, between two and three years old, in milk or in calf, \$15; best heifer calf, \$10; best heifer, between one and two years old, \$5; John Merryman.

Imported Cattle—Herefords.—For the best bull, three years old, \$25; best cow, three years old, \$20; second, three years, \$15; John Merryman.

Short Horns.—For the best bull, three years old, \$25; second best do., \$15; best bull, between one and two years old, \$10; best bull calf, \$5; best cow, three years old, \$20; second, do., \$15; best heifer, between two and three years old, in milk or in calf, \$15; best heifer, between one and two years old, \$10; best heifer calf, \$5; best short-horn herd, \$40—Chas. E. Coffin.

Imported Cattle—Channel Island or their Crosses.—For best bull calf, \$5, Lord Wynhurst Baker; best heifer, between two and three years old, in milk or in calf, \$15 Beauty Manger; best heifer calf, \$10, Gracie Manger.

Channel Island Cattle.—Best bull, three years, \$25, A. B. Davis; best bull, between two and three years, \$15, D. M. Matthews; second best bull, between two and three years, \$10, Joshua Horner; best bull calf, \$5, W. S. G. Baker; best cow, three years, \$20, Clark and Jones; second best cow, three years, \$15, Robert Moore; best heifer, between two and three years, \$15, D. M. Matthews; second best heifer, between two and three years, \$10, L. Mongar; best heifer calf, \$10, R. Moore; best heifer, between one and two years, \$5, W. S. G. Baker; best Channel Island herd, \$40, D. M. Matthews.

For Channel Island bull Billy, owned by Joshua Horner, Dunganon, Baltimore county, second premium, \$10.

Grades or Natives.—Best cow, (milk), \$30; second best cow, \$20; Mrs. George Brown. Best cow or heifer, between two and three years old, \$10, J. O'Neil; second best cow or heifer, between two and three years old, \$5, Mrs. G. Brown; best cow or heifer, between one and two years old, \$10; second best cow or heifer, between one and two years old, \$5, G. Shipley.

Working Oxen.—For the best yoke, eight years old, \$20, J. H. McHenry, for the second best yoke, \$20, Mrs. E. A. Bennett.

Fat Cattle.—For the best beef on hoof, bred and fattened in the State, and owned by the exhibitor three months previous to exhibition, \$25; for the best beefs, not less than three in number, \$20, S. T. C. Brown.

The Mammoth Steer.—A mammoth steer, "Lord Baltimore," was exhibited by Mr. D. Craig, of Port Deposit, Md. The animal is a perfect monster, over seven feet high, and weighing 3,300 pounds. It was purchased by Wm. J. Lloyd, of Union Hotel, Baltimore.

Premium to West Virginia Cattle.—On Thursday there were deposited six very large "fat cattle," grazed by Messrs. Glendy & Cloyd, of Pulaski county, West Va., which were exhibited by Meyers and Seymour, of this city. They arrived too late for classification, but the committee being convinced with the propriety of such action, granted a "discretionary premium" to the exhibitors for the excellence of the stock.

Horses.

Imported Horses.—For the best thoroughbred stallion, "Ismail Pacha," diploma and \$50, Dan. Jenifer; for the best thoroughbred mare, "Lady Emma," \$40, J. W. Garrett; second best thoroughbred mare, "Saleda," \$20, J. H. Reiman.

Blooded Horses.—For the best thoroughbred stallion, diploma and \$50; for the second best thoroughbred stallion, \$30; Geo. G. Maul, "Hanover." For the best thoroughbred mare, \$20; for the second best thoroughbred mare, \$20; John W. Garrett, "Zoe of Esmea." For the best horse colt, three years old, \$15, J. C. Cranon, "Hermes, Jr.," for best horse colt, two years old, \$15, J. W. Garrett, "Selim;" for second best horse colt, two years old, \$10, J. H. McHenry, "Saracen;" for best horse colt, one year old, \$10; for second best horse colt, one year old, \$5, J. H. McHenry; for the best filly, three years old, \$30; for the second best filly three years old, \$15, G. G. Maul, "Teetotal." For the best filly, two years old, \$10, J. H. McHenry, "Arabia;" for the second best filly, two years old, \$5, J. H. McHenry, "Persia;" for the best filly, one year old, \$5, G. G. Maul, "No Name."

Sweepstakes for Stallions and Mares.—For that stallion in any class of whose get the greatest number of superior colts (not less than seven,) shall be exhibited, diploma and \$50, C. A. Murphy.

Imported Horses.—For the best stallion, heavy draft, diploma and \$50, the "Colonel," S. W. Ficklin, for the second best stallion, heavy draft, \$30, Hercules; for the best mare, heavy draft, \$40, Jacquetin; for the second best mare, heavy draught, \$20, Topsy, W. T. Walters.

Heavy Draft Horses.—For the best stallion, diploma and \$50, Hercules; for the second best stallion, \$30, Prince; for the best mare, \$40, Belle; for the second best mare, \$20 Florence; for the best horse colt three years old, \$25, Sutton; for the second best horse colt three years old, \$15, for the best filly two years old, \$10, Nellie; for the second best filly, two years old, \$5, Rosa; for the best filly, one year old, \$5, Jennie; for the best team, not less than three, \$40, Percheron mares, W. T. Walters.

Jacks, Jennets and Mules.—For the second best bred jack, \$15; for the best bred jennet, \$30; for second best bred jennet, \$10; James H. Burris. For best pair of mules, \$25; for second best pair of mules, \$10; for the best team of mules not less than four, \$40, D. Cookes.

Horses for General Utility.—Best stallion, \$50, L. Mongar; second best stallion, \$30, C. A. Murphy; best brood mare, \$40, R. Norris; second best brood mare, \$20, E. M. Price; best saddle horse, mare, &c., \$25, J. M. Caughey; second best saddle horse, mare, &c., \$15, J. Hagood; best boy's pony, \$10, J. H. McHenry; second best boy's pony, \$5, W. P. Webb.

Quick Draft Horses.—Best stallion, John Williams, owner Geo. P. West; second best stallion, John, owner H. Haines; best mare, Lady Kate, owner W. P. Howard; second best mare, Victoria, owner, Geo. S. Brown; best horse colt three years old, Lexington, owner J. Murphy; second best horse colt three years old, Canton, owner George P. West; best horse colt, two years old, Prophet, Jr., owner D. C. Grey; second best horse colt, two years old, Pat Henry, owner S. H. Cole; best horse colt, one year old, Springfield, owner R. Norris, Jr.; second best horse colt, one year old, Donegal, owner C. A. Murphy; best filly, three years old, Florence, owner, R. Norris, Jr.; second best filly, three years old, Dolly Day, owner Robert Moore; best pair horses, Frank Blair and Index, owner C. A. Murphy; best quick draft brood mare, Mary Washington, owner C. A. Murphy; best quick draft gelding, Towhead, owner W. W. Stevens.

Sheep.

American Bred Sheep—Fine Wools.—For the best buck, diploma and \$20; for the best pen of ewes, \$15; K. Crosby.

Imported Long Wools.—For the best buck, \$20; second best do., \$10; best ewe, \$15; second best, do., \$10; C. A. Murphy.

Long Wools.—For the best buck, \$20; second best do., \$10, C. A. Murphy.

Grades.—For the best pen of ewes, not less than three, diploma and \$10; for the best pen of ewe lambs, not less than three, \$10, John Merryman.

Middle Wools.—For the best buck, \$25, Charles K. Harrison, Oxford; second best do., \$10, Col. J. S. Jenkins, South Down; for the best pen of ewes, not less than three, \$10, Charles K. Harrison, Oxford; second best do., \$10; for the best pen of ewe lambs, not less than three, J. S. Jenkins, South Down.

Imported Middle Wools.—For the best buck, \$30, John Merryman; best ewe \$10; second best ewe, \$10, Chas. K. Harrison.

Swine.

Best Chester boar, between one and two years, W. A. Bennett, \$8. Best Berkshire boar over two years old, C. E. Coffin, \$10. Best Essex boar over two years old, J. H. McHenry, \$12. Best Berkshire sow over two years old, J. Tyson, \$12.

Poultry and Other Birds.

First prize, general collection, \$20, W. S. G. Baker, Baltimore county.

No. 1, *Asiaties*.—First prize, dark Braham, \$2, W. S. G. Baker; second, \$1, Jesse Tyson. First prize, light Braham, \$2, Dr. J. S. Bowen; second, \$1, J. E. Phillips. First prize, partridge cochins, \$2, W. S. G. Baker; second, \$1, Henry Wilson. First prize, buff cochins, \$2, C. Trump; second, \$1, Jesse Tyson. Best collection, No. 1, \$5, W. S. G. Baker.

No. 2, *Dorkings, Spanish and Leghorns*.—First prize, gray dorking, \$2, L. Mongar; first prize, white faced Spanish, \$2, W. S. G. Baker; second, \$1, W. Bowman; first prize, white Leghorn, yellow legs, single comb, \$2, W. Bowman; second, \$1, C. H. Betts.

No. 3, *Hamburghs*.—First prize, silver spangled, \$2, W. S. G. Baker; second, Perlie Risman; first prize, black Ham-

burghs, \$2, W. S. G. Baker; first prize, silver spangled, single combs, moonies, \$2, W. S. G. Baker.

No. 4, *Games*.—First prize, black breasted red, \$2, John Merryman. First prize, Irish or shawled neck, \$2, John Merryman. First prize, grey games, \$2, C. H. Betts. First prize, Sumatra games, \$2, C. H. Betts. Best collection, No. 4, \$5, John Merryman.

No. 5, *Polish*.—First prize, silver Polands, \$2, W. Bowman.

No. 6, *French*.—First prize, Houdons, \$2, W. S. G. Baker; second, \$1, W. Bowman.

No. 7, *Bantams*.—First prize, silver laced seabright, \$2, W. S. G. Baker. First prize, golden laced seabright, \$2, W. S. G. Baker; second, \$1, L. Mongar. First prize, \$2, black African, \$2, W. S. G. Baker. First prize, white clean legs, \$2, W. Bowman; second, \$1, C. H. Betts. First prize, feathered legs, \$2, F. Brady. Best collection, No. 7, \$5, W. S. G. Baker.

No. 8, *Turkeys*.—Best pair wild turkeys, \$3, L. Mongar. Best pair, bronzed turkeys, \$3, W. S. G. Baker; second, \$2, L. Mongar. Best pair white turkeys, \$3, Joseph H. Riemann, of Alexandria; second, \$2, W. S. G. Baker. Best pair white Guinea fowls, \$2, W. S. G. Baker.

No. 9, *Geese*.—Best pair white China geese, \$2, W. S. G. Baker; best pair African Geese, \$2, W. C. Wilson.

No. 10, *Ducks*.—Best trio Rouen ducks, \$2, L. Mongar; second, \$1, C. Trump. Best pair of Aylesbury ducks, \$2, W. H. Richardson. Best pair Cayuga ducks, \$2, and best top-knot ducks, \$2, J. E. Phillips. Best pair musk ducks, \$2, L. Mongar; second, \$1, Col. J. Stricker Jenkins. Best pair mongrel ducks, \$2, C. H. Betts.

No. 11, *Ornamental Class*.—Best peacock, shown by himself, \$3, W. S. G. Baker; best pair golden pheasants, \$3, and best pair silver pheasants, \$3, John W. Garrett.

No. 12, *Miscellaneous Class*.—Best coop for hen and chickens, \$3, best feeding box, \$3, and best watering fountain, \$3, W. S. G. Baker.

Pigeons.

First prize, pouters, \$2, T. N. Symington; second prize, pouters, \$1, N. M. Pusey; first prize, swallows, \$2, C. W. Betts; second prize, swallows, \$1, T. N. Symington; first prize, carriers, \$2, N. M. Pusey; second prize, carriers, \$1, C. W. Betts; first prize, almond tumblers, \$2, C. W. Betts; second prize, almond tumblers, \$1, C. W. Betts; first prize, barbs, \$2, T. N. Symington; first prize, fantails, \$1, C. W. Betts; second prize, fantails, \$1, Dr. Morgan; first prize, turbits, \$2, C. W. Betts; second prize, turbits, \$1, T. N. Symington; first prize, trumpeters, \$2, T. N. Symington; second prize, trumpeters, \$1, C. W. Betts; first prize, nuns, \$5, N. M. Pusey; first prize, helmets, \$2, Dr. Morgan; first prize, jacobus, \$2, C. W. Betts; second prize, jacobus, \$1, C. W. Betts; first prize, quakers, \$2, C. W. Betts; second prize, quakers, \$1, Dr. Morgan; first prize, baldhead tumbler, \$2, N. M. Pusey; first prize, black tumbler, \$2, C. W. Betts.

Implements and Machinery.

Best grain fan and separator, first premium, E. Whitman & Sons, \$10; cockle machine, first premium, E. Whitman & Sons, \$5; horsepower corn sheller, first premium, R. Sinclair & Co., \$5; double spout corn sheller, first premium, R. Sinclair & Co., \$4; single spout corn sheller, first premium, R. Sinclair & Co., \$5; hay, straw and stalk cutter, first premium, R. Sinclair & Co., horse power, \$9—first premium, do., hand power; horse hay fork, first premium, Norris & Sons, \$5; grain cradles, first premium, E. Whitman & Sons, \$5; American scythes, first premium, R. Sinclair & Co., \$3; hand hay rakes, first premium, E. Whitman & Sons, \$3; garden rakes, first premium, do., \$2; pitchforks, first premium, do., \$2; digging forks, first premium, do., \$2; long-handled shovels, first premium, R. Sinclair & Co., \$2; briar scythe, first premium, do., \$1; best one-horse plough, \$1, A. G. Mott; best two-horse plough, \$6, A. G. Mott; best three-horse plough, \$6, Norris & Sons; best plow for rough and new land, \$4, Sinclair & Co.; best hill-side plow, \$5, Griffith, Baker & Bryan; best gang plough, \$4, E. Whitman & Sons; best sulky plough, \$5, Sinclair & Co.; best hand plough, \$2, Griffith, Baker & Bryan; best potato plough, \$5, E. Whitman & Sons; best harrow, \$5, Sinclair & Co.; best tobacco cultivator, \$3, Norris & Sons; best horse hoe, \$3, Sinclair & Co.; best hand vegetable cultivator, \$2, E. Whitman & Sons; best field roller, \$3, Sinclair & Co.; best grain drill, \$8, W. L. Buckingham; best corn planter for horse, \$5, J. Wambaugh; best corn planter for hand, \$2, J. Wambaugh; best fertilizer spreader, \$5, Sinclair & Co.; best machine to thrash, &c., for from six to ten horses at one operation, \$30, Norris & Sons; best machine for from two to six horses, \$20, A. G. Mott; best thrashing machine without separator, \$10, E. Whitman & Sons; best straw carrier attachment, \$5, E. Whitman &

Sons; best sweep horsepower, six to ten horses, \$15, J. Thomas; best sweep horse-power, four to six horses, \$10, J. Wambaugh; best two-horse railway power, \$10, Whitman & Sons; best mowing machine, two horses, \$15, Norris & Son; best mowing machine, hand power, for lawns, \$5, Griffith, Baker & Bryan; best combined reaping and mowing machine, \$10, J. Thomas; best reaping and mowing machine, with dropper attachment, \$30, A. G. Mott; best reaping and mowing machine, with self-raking attachment, \$20, Lee & Brother; best hay feeder, \$10, Griffith, Baker & Bryan; sulky horse-rake, \$5, Griffith Baker & Bryan; best hay-press, hand power, \$8, Whitman & Sons; best large cider and wine press, \$8, Sinclair & Co.; best small cider and wine press, \$5, Whitman & Sons; best smut machine, \$3, J. Thomas; best clover huller and cleaner, \$5, Griffith, Baker & Bryan; best stump puller, \$5, Griffith, Baker & Bryan; best bee-hive, \$4, C. W. Banks; best platform scales, \$4, Spear Bros.; best ox yoke and bows, \$2, A. G. Mott; best self-opening and shutting gate, \$10, R. R. Carman; best machine for grinding reaper knives, \$3, J. Thomas; best road scraper, \$2, A. G. Mott.

Discretionary Premiums.

The following among others were awarded Discretionary Premiums:

Wm. E. Turner & Co., Richmond, Virginia, steam engine and log wagon combined, diploma and \$20. Wm. R. Fowler, Anne Arundel county, Maryland, fly driver, \$5. Cotter Bride, Baltimore, rustic work for gardens, diploma and certificate of merit. James Armstrong, Baltimore, champion fire-place heater, diploma and award of merit. Wagoner & Matthews, Westminster, Maryland, one-horse sweep power, diploma; also, hominy mill, \$10. B. G. Fitzhugh, Frederick, Maryland, cart loader and dumping cart, diploma and certificate of merit. John Richardson, Harper's Ferry, Virginia, boring machine, \$10. J. C. Durborow, Baltimore, self rake attachment to a mower, diploma. F. T. McWhorter, Delaware, sacking and weighing attachment to threshing machine, diploma and \$10.—J. Brown & Co., Peekskill, New York, harrow, diploma. Thomas Basshor & Co., Baltimore, steam pump, diploma and \$10. Sylvester Burns, Montgomery county, Maryland, sample of tobacco, \$10. Morrison & Co., Baltimore, pump for hot water or acids, diploma and \$10. Chas. Shultz, Baltimore, circular saw, \$5. Acme Mower Company, Wheeling, West Virginia, mower and dropper, diploma. J. F. Barrow, Baltimore, automatic gate, diploma.

Garden Vegetables.

Largest assortment, first premium, W. S. G. Baker, \$20; second do., J. H. Reiman, \$10; blood beets, first premium A. D. Brown, \$3; turnip beets, first premium, W. S. G. Baker, \$3; cauliflowers, first premium, A. D. Brown, \$3; brocoli, first premium, A. D. Brown, \$3; cabbage, first premium, J. H. Reiman, \$3; carrots, first premium, Mr. Parker, \$3; parsnips, first premium, J. J. Tyson, \$3; egg plants, first premium, W. S. G. Baker, \$3; onions, first premium, W. S. G. Baker, \$3; sweet potatoes, first premium, W. D. Brackenridge, \$3; pumpkins, first premium J. H. Reiman, \$3; second do., A. D. Brown, \$3; winter squashes, first premium, J. H. Reiman, \$3; tomatoes, first premium, J. H. Reiman, \$3; roots of celery, first premium, W. S. G. Baker, \$3.

Flowers.

Largest collection, \$10, J. Pentland; largest collection nursery, \$5, J. Pentland; verbenas, \$4, J. Pentland; foliage plants, \$10, J. Pentland; evergreens, \$10, W. D. Brackenridge.

Cut Flowers.—First premium, W. D. Brackenridge, \$4; 2d do., A. D. Brown, \$2. Dahlias—1st premium, W. D. Brackenridge, \$5. Roses—1st premium, Miss Murdock, \$5; 2d do., James Pentland, \$3. Design of Flowers—1st premium, A. Brackenridge, \$15; 2d do., Miss De Brill, \$10. Basket with Flowers—1st premium, Mrs. George S. Brown, \$5; 2d do., Miss De Brill, \$3. Vase with Flowers—1st premium, Miss B. Brackenridge, \$5. Round Hand Bouquets—1st premium, J. Pentland, \$4; 2d do., Mrs. G. S. Brown, \$2. Round Bridal Bouquets—1st premium, Mr. Pentland, \$4.

Grain and Root Crops.

White corn, first premium, Mrs. George Brown, \$5; yellow corn, first premium, J. H. Reiman, \$5; oats, first premium, do., \$5; Irish potatoes, first premium, do., \$5; sweet do., first premium, W. D. Brackenridge; ruta бага turnips, first premium, C. K. Harrison; mangel wurzel, first premium, C. E. Coffin, \$5.

Miscellaneous.

Butter.—First premium, J. H. McHenry, \$5; 2d do., Mrs. Constantine, \$3.

Tobacco.—First premium, leaf tobacco, \$10, J. A. Burrough, Charles county.

THE STOCK SALES.

The stock sales comprised a number of imported "Percheron" horses, several half-bred Percherons reared in this country, and a small herd of imported Jersey cattle, offered by Wm. T. Walters, Esq., of Baltimore city, and the price obtained for each goes to prove the high appreciation of fine stock by the farmers present. Annexed is a list of the stock, and the amount obtained for each:

Imported Horses.—Stallion "Hercules," 8 years old, purchased by Mr. Jacob Bauchman, of Lancaster, Pa., for \$1,110. Stallion "Marock," aged 9 years, went to W. T. P. Turpin, for the Queen Anne's County Agricultural Society, for \$1,100. Mare "Jacqueline," aged 9 years, and mare "Topsy," aged 9 years, sold to Lewis Hopkins, of Baltimore city, for \$300 each. Mares "Belle," 8 years, and "Flora," 8 years, sold to Joshua G. Harvey, the first for \$420, the second for \$330. Mare "Lizzie," with foal, sold to C. E. Coffin, of Muirkirk, Prince George's county, Md., for \$50.

Half Bred Percherons.—Stallion "Sultan," 3 years, sold to Peter Hefflev, of Somerset county, Pa., for \$350.—"Prince," aged 3 years, at \$1,000; "Nellie," aged 2 years, at \$500, and "Rosa," aged 2 years, at \$425, were all purchased by S. M. Shoemaker, of Baltimore. "Jeannie," aged 1 year, for \$275, sold to C. R. Paxton, of Leesburg, Va. "Fannie," aged 1 year, sold to Jas. E. Iglehart, of Anne Arundel county, for \$140. "Lucy," aged six months, was sold to Jacob Bauchman, of Lancaster county, Pa., for \$190. "Nannie," aged six months, sold to Simon Cameron, Jr., for \$190. "Don," aged 2 years, sold for \$500 to J. W. Dwyer, of Coshocton, O.

Imported Cattle.—Bull "Hannibal," aged 4 years, sold for \$60 to Henry Smith, of Shepherdstown, Va. "Princess," 5 years, for \$75, and "Rosa," aged 5, for \$105, were sold to S. M. Shoemaker, of Baltimore.

EVENING RIDES ABOUT THE CITY.

The *Maryland Farmer* has been ventilating itself and inspecting objects of interest, as also interviewing note-worthy people, in the environs of the city, during the fine autumnal afternoons. The Proprietor with his Editorial staff and a friend or two, spent several evenings most delightfully in riding about the outskirts of Baltimore, and we can safely say there is no city in the Union whose surroundings are more beautiful, varied and interesting, or which will more forcibly command the admiration of the tourist than the views around the city of Baltimore.

We shall at present only mention a few of the most remarkable country seats. One beautiful evening in September we went out the Harford Road and turned into the splendid ground of Clifton, belonging to a gentleman who is one of the few philanthropists, whose great wealth is destined to establish useful benefices, ornamental to the city, charitable to the citizens in want and sickness; and build temples of learning to aid science and the spread of useful knowledge among all classes, thus rivaling his great prototype, *Peabody*, in magnificent public charities,

"And whose beneficence no charge exhausts."

The dwelling is commodious but by no means pretentious. The estate contains almost five hundred acres, and lies beautifully rolling; a portion is in crop, and another portion in grass, but most of it is in wood and ornamental grounds, that are very tastefully laid out in drives and walks, and ornamented with flower beds, rare trees and fine

ruits; statuary, bridges, lake and fountains, with a large and elegant gothic summer house, two stories high, embowered in trees and vines and flowers. An air of quiet and repose, of independent stillness with a sort of hush of security so pervades this lovely spot that the very birds and squirrels seem domestic, as if they felt they had a protector, with none to make them afraid. It is in some respects more enchanting than *Druid Hill*, and must have cost an immense sum of money to have brought it to its present state of beauty. The graperies are extensive, but it does not appear to have done well this year. The Conservatory is very extensive, as also are forcing and propagating houses. We saw some very large Japonica trees, curious variegated leaved vines and plants from Mexico and Australia; rare and remarkable plants from South America, some of which had the color and feeling of the richest velvet; large masses of geraniums and canna; fine specimens of Acacias, showing the general appearance of the Acacia forests of Australia. A large number of the rarest evergreens are found in this arboretum, and are placed with great judgment and taste, but in some instances too close to other trees to allow the full development of their beauty and grandeur. The evergreens form a marked feature of the place. We never have met with, in the national or private conservatories and green houses, some of the specimen of plants which are to be found in this collection, which seems to be rather choice, than extensive. We tasted some of the delicious dwarf pears while viewing the loaded shelves of the fruit room, and were satisfied with the aromatic melting pulp. This splendid estate is intended by Mr. Hopkins for the location of his college, which is we learn the pet of his great philanthropic scheme. After spending some hours in this beautiful suburban retreat, in the regretted absence of the venerable owner, but whose chief manager, Mr. Fowler, extended to us those courtesies so gratifying to strangers. Mr. F., has held his position on those grounds for twenty years, which speaks well for his qualifications for his office.

Leaving through the elegant entrance gate-way, we went on the Hillen Road for a mile along the large estate of J. W. Garrett, Esq., one of the railroad kings, but whose many official duties involved by his gigantic enterprises, do not preclude his finding time to indulge his rural taste and dolce far niente at his elegant suburban retreat, as we discovered on inspection of his beautiful grounds, although it is a new place and time has not allowed its full beauties to be developed. He too was absent, but his gardener, Mr. McKensie, seemed to take a pride in showing us all that we had time to see, missing however, owing to the lateness of the

hour, the Pheasant-preserves, and an inspection of the fine stock. The green house, graperies and propagating house are all under one cover, and while it presents an artistic and beautiful appearance is said to combine more of the late improvements as to form, mode of heating and supplying the water, etc., than any such building in the country. We found many rare plants in the conservatory, which has a tank or cistern in the centre of the building, supplied by the rains falling on the roof, and thus furnishes the water for heating the whole building. The graperies were in perfect order and had fine specimens of European grapes. Among the flourishing vines we noticed the chasselas, black Hamburgh, splendid white Tokay, with immense bunches of large fruit—magnificent Gros. Cromier Du Cantel—some bunches no doubt would weigh pounds, with single grapes that would scare get in the little mouths' of beauty, and made us think of the grapes discovered by the spies in the land of Eschol. There too, was a good specimen of the Santa Cruz grape which is a very late ripener. The lemon trees were loaded, with very large fruit. Before the grape house on the terrace was a wide border of flowers, with masses of splendid double Portulacca placed at irregular intervals among other taller flowers. Below the terrace was a large vase filled with blooming plants, surrounded with neatly laid out flower beds differing in shape and filled with flowers tastefully arranged as to colors and size. In the distance was the orchard of dwarf fruits. But we cannot describe all we saw, or speak of what the plan developed to be effected in time. The tout ensemble was highly pleasant to look upon and made us think how much mental pleasure was often generated by intermarried refined taste and solid capital. Can moneyed men apply a portion of their large capital to a better, more rational, more humanizing purpose than adorning their homesteads with beautiful flowers and trees and useful birds and fruits? We left reluctantly and lingeringly these lovely sylvan retreats for the dusty York road that led to our town domicils, with our mouths running water at the recollection of those luscious grapes which were to be seen, "but touched not, *tasted not*." We passed through the flourishing village of Waverly whose *Heights* are to become, not in far off time, but soon, the residence of upper tendom. Hence the dust and ride made us thirsty and we *aled*, by *George*! finding it, fully as invigorating as the limpid Adam's ale we drank from the fine spring at Clifton.

The agricultural products of the United States have a value of three thousand million dollars.

Beauty draws more than oxen.

REPORT OF AGRICULTURAL DEPARTMENT FOR 1871.

With pleasure we chronicle the unusually early issue of the annual Report of the Agricultural Department. We received as early as the 20th of August the report of 1871, from the Department of Agriculture, and from a careful perusal we find it a valuable document. The report of the statistician is very full. The article on *Tests of Department Seeds* is very interesting, and shows that the practice of sowing a less quantity of seed per acre, than formerly, is prevailing among the more carefully observant farmers. But where a very small quantity is sown, the cultivator must be the best and the land very rich. On most lands, a medium quantity, not too little, nor an excess of seed should be sown. The *Excelsior* Oats and the *Schoen* Oats are highly spoken of as to yield and heavy weight. Of wheats, the *Tappahannock*, *Fultz*, *Arnautka* and *Touzelle*, are most favorably spoken of and highly recommended by farmers in different portions of the country.

From the chapter on "Southern Fruits," we extract the following :

Maryland Fruits.

The largest fruit enterprise reported from Maryland is that of C. P. Morton & Co., on Chester River, in Queen Anne County, Eastern Shore. This tract of 1,200 acres was purchased 12 years ago at \$14 per acre. The senior partner, who lately retired from the firm, disposed of his interest on the basis of \$80 per acre. There are 100,000 bearing peach trees in the orchard, the crop of which nets annually between \$20,000 and \$30,000. A large proportion of the fruit is canned, but heavy shipments of fresh peaches are made daily during the fruit season to Baltimore and Philadelphia.

The profits of peach culture in this county are variable. Mr. William H. Jacobs, of Centreville, states that his peach trees in 1870, then in their second year's bearing averaged three pecks per tree, and yielded a net profit of \$140 per acre. Last season the averaged crop was a bushel per tree, but the net profit was cut down to \$22 per acre by the immense general crop and the unusually early ripening and rapid decay of the fruit. The season for medium and late peaches was reduced from six weeks to four, the fruit ripening in too quick succession. The fluctuation, however, has not greatly discouraged the peach culture. The small stock of canned fruit on hand and the late rise in prices indicate an expanding market. There are about 300,000 bearing trees in the county and 200,000 trees not yet in bearing. They are generally planted twenty feet apart. Of market varieties the earliest is Hale's Early, which is somewhat uncertain from its tendency to rot. Troth's Early, large Early York, Crawford's Early and Late; and such others as afford a regular succession are generally planted. In pear culture the tendency now is to rely upon a few good varieties, such as the Bartlett, Seckel, Duchesse, &c. The strawberry-growers, tired of the market fluctuations, induced a regular fruit-canner to establish himself in the neighborhood. He now pays 6 cents per quart for the fruit through

the season, enabling the growers to realize from \$150 to \$200 per acre clear profit. The area planted in strawberries has consequently increased. Wilson's Albany constitutes two third of the present crop.

Dr. E. A. Vannort, of Hanesville, Kent County, on the Eastern Shore, states that about one-fifth of that county is devoted to peach trees, planted at the rate of about 120 trees per acre, and averaging a box and a half of fruit to the tree. The net price per box realized by the grower is 40 cents, giving a profit of about \$37 per acre. Hale's Early will not pay, as it generally rots badly and not mature well at any time. Peach culture was very profitable in this county in 1871.

Mr. Samuel Vannort, of the same locality, has 2,500 trees in bearing, on 20 acres, planted in the spring of 1859. He marketed last year 3,000 bushels, at 50 cents per bushel, clear of all expenses. A neighbor gathered 600 bushels from a single acre. Injuries to fruit were very slight. The best market varieties, are Startt's, Crawford's Early, Troth's Early, Stump the World, Melocoton, &c.

Mr. E. P. Janvier, of Still Pond, Kent County, has 120 acres of peach trees, planted twenty feet apart, all in bearing. He finds that good trees, five to twelve years old, average about 100 bushels per acre, and he states the average net price to the grower to be 30 to 40 cents per bushel. The injuries from insects, &c., are small, with reasonable care. Hale's Early, though a poor peach, by ripening early, brings \$1 50 per bushel, while the Early Crawford and Old Mixon sell for but half that price. Of marketable varieties, he recommends that 5 per cent. of the orchard be planted in each of the following varieties: Hale's, Troth's Early, Crawford's Early, Early York, Reeves' Favorite, Harker's Seedling, Stump the World, and Free Heath, and almost 10 per cent. each in Old Mixon Free, Crawford's Late, Ward's Late Free, Red Smock, and Heath Cling.

Messrs. H. Williams & Brother, Huntington Calvert County, have 1,250 peach trees, planted in 1866, producing in their second year of bearing (1871) 100 bushels per acre. The two crops averaged \$900 each. The loss from insects, disease, &c., has been about 1 per cent. For three years the orchard was cultivated in tobacco. Every tree is annually worn and pruned with great care. In 1870, 1,000 boxes of fruit were delivered at the water's edge, at \$1.60 per box, giving a net return of \$1,400 on 12 acres. The large crop of 1871 caused a large amount of fruit to be left on the trees. The net return of that year was \$400 upon 800 boxes. The fruit is of the best quality, and commands better prices than the Eastern Shore peaches.

Mr. Henry Stabler, of Sandy Spring, Montgomery County, finds the Old Mixon Free, Crawford's Late, and Smock Free the best market peaches, averaging about 2 bushels per tree. Of apples he prefers the White Spice, Cornell's Favorite, Summer Queen, &c. Of pears the Bartlett and Duchesse'd Angouleme are the most desirable. Of grapes the Concord is the only variety that will pay expenses. Grapes usually bring but 4 cents per pound at the vineyard. The borer is the only insect that does any damage to peach trees, destroying an orchard about every ten years unless extraordinary care is taken. Pears are seldom injured by insects, while frequently three-fourths of the apple crop is lost from their ravages.

Mr. W. J. Scofield, of the same locality, loses

from insects almost one-sixth of his pear crop each year, while his apples are but slightly affected. His peach trees live but seven or eight years. His best market pears are the Bartlett, Lawrence, Buerre d'Anjou, Duchesse d'Angouleme and Seckel.

Apple culture is the most flourishing branch of fruit-growing in Baltimore County. Mr. C. Gingrich, of Reistertown, has 400 trees upon ten acres. The best varieties are winter apples, such as the Baldwin, Bellefleur, Fallawater, &c. Summer apples do not pay expenses. Good winter varieties bring \$1.50 to \$1.75 per bushel. He averages 90 to 100 bushels per acre. The apple-borer is troublesome. The trees should be kept free from grass, well scraped, and washed with strong soap-suds, in which sulphur has been mixed.

In grape culture Mr. G. H. Mitnacht, (Mr. Mitnacht has since died, (Pikesville, Baltimore County, reports 11,000 vines planted on 16 acres, the results of which, so far, have been very encouraging. The yield of 1871 was "enormous," the bunches being very large. Some Concord bunches weighed one pound four ounces, and averaged over one pound each. He sold about 2,500 pounds of fruit at 10 cents per pound, and made 1,500 gallons of Clinton and Concord wine. He closely watched the insects and carefully protected the birds. No indications of rot were seen, and but slight symptoms of mildew, after a rain-fall of five inches in August. These symptoms were removed by cutting away the superfluous, unhealthy leaves, and admitting air and light. A neighbor, about a mile distant, lost all his grapes from mildew. Mr. Mitnacht trains his vines after Fuller's arbor system. He finds the Concord the best market grape.

It is a striking omission, in this notice of Maryland fruits and fruit culture, of Col. Edward Wilkins' celebrated Riverside Fruit Farm. The Colonel has perhaps the most extensive Peach orchard in the world, and also very large orchards of Apples and Pear, Apricot and other fruits. This splendid estate, yielding such enormous quantities of fruits, and on which, some years, large quantities of brandy are distilled, we have often alluded to, and on some occasions in past years given particular descriptions of, and therefore deem it unnecessary now to enlarge upon the theme, contenting ourselves with barely calling attention to the fact of its being overlooked by the writer of the article from which we make the extract.

On the subject of the area of farm lands the statistician says:

The total area in woodland is 159,310,177 acres, or 39 per cent. of the aggregate of 407,735,041 acres in farms. The Southern States are remarkably well wooded, the twelve States, from Maryland to Tennessee, averaging 52 per cent.; the New England States have 32 per cent. of their farm area in forest; the Middle States 28 per cent.; and the Central States, from West Virginia to Nebraska, averaging 32 per cent. West Virginia has 51 per cent.; Kentucky, 48; Ohio, 31; Indiana, 39; Illinois, 19; Iowa, 16; Kansas, 11; Nebraska, 10; California, 4. The Territories are not rich in forests, except Washington, which has 44 per cent. of its farm area in woodland.

HENRY WARD BEECHER ON INTEREST.—No blister draws sharper than the interest does. Of all industries none is comparable to that of interest. It works all day and night, in fair weather and foul. It has no sound in its footsteps, but travels fast. It gnaws at a man's substance with invisible teeth. It binds industry with its film, as a fly is bound in a spider's web. Debts roll a man over and over, binding hand and foot, and letting him hang upon the fatal mesh until the long-legged interest devours him. There is but one thing on a farm like it, and that is the Canada thistle, which swarms new plants every time you break its roots, whose blossoms are prolific, and every flower the father of a million seeds. Every leaf is an awl, every branch a spear, and every plant like a platoon of bayonets, and a field of them like an armed host. The whole plant is a torment and vegetable curse. And yet a farmer had better make his bed of Canada thistles than to be at ease upon interest.

KILLING WEEDS IN LAWNS.—The American Rural Home says: Docks, Canada thistles, horseradish, dandelions, and other strong rooted varieties, are frequent tenants of the grass plot. They obstruct the lawn mower, and when shaven closely as the grass, spring quickly into prominence again. Perhaps the best method of killing them out is to use a narrow-bladed spade, or a strong knife, which will cut the root deep enough under the surface, when it can be pulled up, and in most cases it will not grow again. This, however, is not the case with strong growing and extremely vital plants, like horseradish, thistles and dock. These require more frequent treatment, and perhaps something additional to the cutting. If a little salt, or what is much better, kerosene, can be applied to the cut surface of the roots, it generally kills them completely.

GOING INTO THE DOG TRADE.—Col. G. W. Palmer, of Saltville, has adopted a novel method of getting rid of sheep-killing dogs. In a card published in the *Abingdon Virginian*, he says:

"In view of recent heavy losses of improved sheep by dogs, and a prospect of a continuance of those losses for all time to come, in the absence of some law to prevent, which it seems is beyond the ken of our legislators, I am compelled, in self-defence, to go into the dog business. I therefore propose, for the next 30 days, to pay two cents per pound, gross weight, for all dogs raised within five miles of Saltville. Dogs to be raised of any age between eight months and five years. They may be delivered at my scales either in small lots or large droves. Cash paid on delivery."

WHAT HIGH BREEDING AND HIGH FEEDING OF STOCK WILL DO.—Mr. J. W. Rouse, a well-known farmer in Campbell county, Kentucky, has a calf which at five hours after birth weighed one hundred and two and a half pounds; at four weeks, one hundred and eighty pounds; at six weeks, two hundred and forty pounds; and at eight weeks, two hundred and ninety-six pounds.

A. F. Aulick, of Bracken county, same State, sold, a few days since, a calf four months old, weighing five hundred pounds. It is a Durham of Dr. Herr's stock, of Lexington, Kentucky.

Our Agricultural Calendar.

FARM WORK FOR NOVEMBER.

It is presumed you have housed your tobacco, and finished seeding all your grain, and got a supply of wood cut and now seasoning, for a portion, at least, of your winter's burning.

Ice.

Is your ice-house nicely cleaned out and in order? Is your ice-pond in good order? If not, lose no time or expense to have it completed as speedily as possible. *Comfort certainly, and possibly health,* may depend upon it next year. Sometimes we have but one good freeze, and that generally is before Christmas. *Embrace the first.*

Fruit Trees.

Plant largely of fruit trees of all sorts, you cannot have too many. Small fruits as well as dwarfs and standards. This is held by many horticulturists to be the best month for this work. Do not neglect to plant out this season a few more than you may deem absolutely necessary. You owe it to yourselves, your children, friends, and to posterity. No man is a good or thoughtful farmer who does not annually plant out many trees, for fruit, for timber, for shade, for ornament, for profit in the future. *Recollect this. It is true as preaching.*

Butter.

Let your good wives put up the winter supply of butter this month. Feed the cows generously and they will yield a supply of butter for winter, superior to the famed Goshen or Orange County butter; let them have good timothy pasture, pumpkins, and some corn or oats, and bran or shorts, and you will be amply repaid by the large amount of delicious butter all winter and next spring, when you will not be forced to sell or starve your calves.—Thus you will save both ways. To have nice butter that will keep a year, whether put up in May or November, you must have your dairy and all the utensils scrupulously clean—use hot and cold water and soap freely. Cream not to be kept too long before being churned, so as to get a bitter or acid taste. Wash the butter in cold or ice water, and work all the butter-milk out of it, and salt to your taste; do not use a heavy hand; it requires but little salt with a small quantity of saltpetre to keep it if all milk and water be washed out of it. Let it stand twenty-four hours, then work it thoroughly over, so as to get every drop of liquid out, and add more salt if you think it requires it; pack tight in the tub or jar, and cover with a strong brine; when the jar is full pour off the brine, and cover the top one inch deep with fine salt, pressing the salt close

around the edges to exclude all air. On this place a *clean wet* muslin cloth, and press it around the edges. Over the top put a tight cover of cloth or wood, and set away in a cool place. If this packing be done in early summer, put the jar in the ice-house, buried half its depth in the ice, and kept in the ice until cold weather. Such butter will be sweet and delicious in May next year. This is our experience of the past when we for years enjoyed the delights and freedom of a rural home, before we became imprisoned in the 'pent up Utica' of a city's walled limits. What we here say we know, and why should we not have as good butter as any to be found in the world? It is in the power of every farmer's wife, if she would only try! Then, ladies, shall we have good winter butter?

Corn.

Continue your efforts to get in the corn before severely cold weather sets in, as it is very painful to husk corn in freezing weather. Be careful not to put it in too large heaps if the corn be green or the weather be warm. Do not put it in the crib wet.

Wood.

Should be cut and hauled up in large quantities for fear of bad weather. If you use stoves the wood ought to be dry and seasoned. If you burn coal, be sure to get in your winter's supply, with a sufficiency of dry kindling wood stowed away.

Provender.

Haul up and rick or put under cover at least a month's supply of corn-fodder close to your feeding pens, and keep it as a reserve for bad weather.

Hogs.

As soon as your hogs are sufficiently fattened, kill them, and do not wait *for the moon to get right*. They do not fatten kindly in cold weather.

Potatoes

Must be dug this month, if they were not, as they should have been, last month.

Turnips.

Turnips should now be put away in the cellars or stoops. The best way to make stoops for turnips or pumpkins is to dig a six foot wide ditch, three feet deep, and build a tight fodder house over it, or a straw rick would be better, with the ends closed up, and a door to fit tight under a sort of porch, covered with straw or fodder in the center. A stoop of this sort would hold fifty loads of pumpkins or one thousand bushels of turnips. As the vegetables are rounded up in a conical shape, leave room for straw leaves or corn shucks to fill the space between the walls of the fodder house or straw rick and the roots, so as the pile is made this vacancy can be filled up. Thus you preserve the vegetables and the shucks. Roots will keep in this way all winter. Ventilators may be made on top,

and closed with a wisp of straw in very cold weather. The late Mr. Belizhoever, of Stage Coach and Old Fountain Inn days had a complete one (the first we ever saw,) on his little dairy and swine farm, on the old Frederick Road, near where the city limits now extend, if we remember aright.

Shelters.

This month all necessary shelters for the different sorts of stock ought to be made. They can be made of forks, poles, and pine or cedar brush, with straw and corn stalks intermixed in the building of these open sheds, so as to make them water and storm proof, and with a proper exposure, quite comfortable; certainly sufficiently warm for sheep or hogs. Under these shelters should be a deep bed of dry leaves or straw, which ought to be removed as often as they become wet or filthy, and a fresh supply furnished. In this way tons of fine manure can be accumulated during winter, and the stock kept apart, which is often desirable. Colts of different sexes, brood mares, sheep and hogs, all ought to be in separate lots or fields. The shelters for sheep could be built on some elevated knoll, which by spring would become a rich and fertile spot. Keep a trough under their shed to feed grain in time of snows, and roots or grain all the time to ewes with young lambs, or mutton sheep. Those for colts or calves might be built against a straw or bay rick, which would furnish them both shelter and food on one side of their domicile. In just such a manner was that great racer Argyle reared, and he sold at one time for \$25,000. He had some grain twice a day.

Poultry Houses

Ought to be made tight and warm as possible, if you desire the luxury of newly-laid eggs this winter.

Beef Cattle.

Look well to these and feed liberally, if you desire ready sales at fine prices—yet look to the cost of their keep, for grain is always dear feeding, and particularly this year.

Plowing.

All stiff, tenacious spots should be plowed deep and subsoiled if possible, the land first having been underdrained, or freed from standing water by surface ditches, so that the soil may be subjected to the action of frost and the pulverization of the winter's cold. Wet, low spots ought to be plowed up in narrow beds—say six to ten feet wide—back furrowed, so as to leave deep furrows or ditches between the beds. All land that has been strongly turfed over for several years ought to be plowed—that the turf may rot before next spring. And each day as

"The western sun withdraws the shorten'd day,
And humid evening, gliding o'er the sky,
In her chill progress, to the ground condens'd
The vapor throws,"

You will leave your day's toil and join your happy family circle around the cheerful fire, while the tea is brewing, the potatoes roasting and the beef steak broiling; but before it comes on the table, we take our leave, wishing you many such happy scenes.

Garden Work for November.

Much depends upon the care bestowed on the garden this month whether we shall have satisfaction from it during winter and early spring. The salad crops are to be thinned, and given their last working with hoe and rake, and last top-dressing of equal parts of ashes, plaster, bone meal and well rotted stable manure. They are to be mulched or brushed, strawed or bedded in cold frames. The same is to be done to cauliflower, early cabbage plants, &c. The late sown turnips and beets and radishes are to be gathered and put away in heaps as we have heretofore suggested, so they can be easily come at during winter.

Celery.—This aristocratic yet superb vegetable is to be earthed up for the last time, and can be done in the usual way, but we would commend the late practice which Mr. Henderson gives to the readers of his "Gardening for Profit."

Cabbages—We have found that they kept best with heads down packed four in a row, stalks and roots inclined to the center. Packed close and covered with earth six inches; then, as winter comes on cover with straw, and corn stalks on the straw to keep it from blowing off. Those not quite headed should be put in trenches, and covered to the head, roots down; over the whole a cover of plank or straw roof, or fodder house, so they may perfect their heading. So with cauliflower and brocoli. Why are not these two species of the Brassica genus more cultivated? They can be easily grown, and just ten times more delicious. One ounce of well dressed cauliflower is worth 10 lbs. of cabbage to a man who knows "what's what" in the eating line of life.

Parsnip, Carrot and Salsify—Do better in the open ground, to be dug as wanted, in the Middle and Southern States.

Brussels Sprouts.—These are to be left in the places they grew, and to be sluiced with strong soap suds if they are filled with cabbage lice, as they too often are. When used they ought to be immersed in strong salt and water hot, and then washed in cold water. All impurities thus taken off, they are dropt in boiling water, with a small quantity of potash or soda, or a little bag filled with ashes, and they will in twenty minutes cook green and tender.

Small Fruits—Work these, trim them, and mulch heavily with long stable manure, after tying them up on to stakes. Plant of every sort all you have the space for. You cannot have too many currants and gooseberries, for they each make the finest sorts of wine at little cost and labor, and sell high when of the best quality. A hundred well grown goose-

berry bushes, in full bearing, will make a barrel of wine, costing about \$15, which will worth at two years' old, if it had been properly made, \$100.—Here is money at our doors begging us to put it in our pockets. The Houghton Seedling is the best by a long way of any gooseberry, for it is prolific, hardy, free from disease, and never mildews. The English varieties are larger, but tasteless, and always in our climate mildew so badly they are worthless. They are literally "far fetched and dear bought." We have tried all of the famed English varieties, and pronounce them, in our region, to be humbugs.

Figs.—Figs can be successfully grown in Maryland and Virginia, but require care in winter to protect them. Judge Tuck, an amateur horticulturist, raised them successfully in Upper Marlboro. When cold weather approached, he mulched them with straw and leaves a foot deep; tied up the branches to the main stem, and stacked corn fodder around them, tying the tops of the corn stalks tight at top, and had another band around the center with earth thrown slightly around the bottom of the stalks, so as to keep them in place, and prevent the water settling about the fig trees. Some species are, however, hardier than others. This exotic fruit can be grown here, and as it is a delicacy, it sells high in the market. A roasted green fig is a sure cure for a gum boil—one of the most painful complaints humanity is heir to, next in rank to tooth-ache, or gout, in its tormenting character.—Our friends should cultivate the fig, for its fruit, its beauty and its medicinal qualities, which are various, and so recognized by the learned M. D.'s. It is best to plant figs in the spring.

Potatoes.—If you want early potatoes next year try a plan we found successful twenty years ago. Some time this month manure a small place in the garden with southern exposure. Dig deep and rake well—lay off drills three feet apart, trenches three inches deep. About December 1st select sound matured potatoes size of hen's eggs, or little less, drop in the drills, cover with half rotted stable manure, then by walking in the drills press down, rake all the ground level, and put a cover of five or six inches of leaves, straw or other loose material, and brush or logs to keep it from blowing away. Next April rake off the covering, and work the ground well. You will have an early crop of potatoes if the vile ground mice have kept away. The ground must have been properly drained, or the excess of moisture will rot the potatoes. Two things ought to have been cared for—viz., proper drainage and depth of planting and covering to keep the seed from being frozen. Four inches in ground, and six inches solid straw, or other mulch will do this, except in extraordinary winters. The mulch is not lost, it goes to the strawberry beds in April, or to the compost heaps.

For the Maryland Farmer.

TO YOUNG FARMERS—NO. XI.

**Punctuality—Seasonableness—Perception—
Observation—Railroads, and Weeds—
aid to Memory.**

"Borrow not to vex thy brother."

My young farmer friends can hardly learn and practice any habit which will secure more profit and pleasure, through life, than *punctuality*, in either their business or in all engagements and promises. If they are members of any society, and particularly if they are officers in it; they should be prompt in attendance at the meetings, and always *be on time*. If they promise payment, or to do a job of work, *be prompt* to the time; it will be sure to give a proud, pleasant feeling, to your yourself, and secure confidence and respect in the one for whom you perform. And, above all, if you *borrow* any tools or implements from a neighbor be punctual in returning the same, at once; and not force him to go after them; it is worse than stealing to keep them, when he may be losing time and temper and patience for the want of them; and possibly forget who last borrowed them; and not know where to find; about the meanest thing a farmer can possibly do is to borrow and not *promptly* return the tools of his neighbor; yes, a little meaner still, is it, to injure them, get them out of repair, so that, when the owner is compelled to run miles to get them, with much loss of time, he finds them dull, rusty and broken, and then has to go to the shop and wait for repairs. Think of it, young farmers, and say, if any thing can be meaner! It is as bad as borrowing a cheese press, and the next season sending it home with the screw broken, and the curb filled with soap-grease and potato skins, when the owner has sent a hired-man and team after it. Even should you steal sheep and chickens, don't add the greater degradation of borrowing tools and not promptly return them; and to make the matter safe, better buy and keep your own tools, which all good farmers should do; try it.

Next to weeding-out these bad habits, be seasonable—just about now—in killing weeds; a day will do more now, than a week next spring, in killing weeds, by preventing them from going to seed, or spreading their ripen seed; clean down the fields that have been mowed and pastured, in cases where weeds have rankly sprung up; and the corners of fences and old hedges, &c. Also, the railroad companies should be compelled to keep their lines cleaned out, in season.

Then learn to *watch* and *perceive* everything—*notice* and remember everything, that requires your care; and by studiously acquiring the habit of observing events, objects, and actions, you will be astonished and pleased to find how much you can learn and remember that will be useful and profitable.

LAND MARK.

For the Maryland Farmer.

A VARIETY OF STATEMENTS AND SUGGESTIONS ALL IMPORTANT TO THE FARMER.

Men of no vocation are generally, as a class, so neglectful of their well known duties as farmers, and to neglect and procrastination, loss, and want of success in their pursuit is attributable in a greater degree, than to all other causes combined.

Negligence extends its baneful effects to every branch of husbandry, and in every district of this country with which the writer is personally familiar, which comprises a very large proportion of the Northern, Eastern and Middle States, and not a small area in the Southern, is the net revenue of the plantation and farm seriously curtailed by its blighting, ruinous influences.

In no art, or pursuit, are the effects of negligence, or of deferring the execution of the work of to day until to-morrow, so productive of irretrievable loss. It has a great number of important branches, and each branch has its proper season for execution, and that season is not controlled by day and date alone, but by an infinite variety of collateral circumstances, and many of them of importance, and such as should, to insure success, guide the husbandman in the prosecution of his varied vocation, *e. g.* on a tenacious clay soil, the period at which such a soil may be said to be really in a proper condition to till between two seasons of rain fall, is rarely more than two or three days, hence this condition should be availed of to the fullest extent with the force at command.

But, how often do we see this condition of the soil treated with utter indifference, and the farm force, either loitering away the golden opportunity, or engaged with less important work, which might have been deferred without loss. For the benefit of that class of readers who have had no experience with the tillage of such a soil—which is numerous—it will be proper to state what those who have to contend with, in its capricious qualities, know to their sorrow. If it is tilled when too wet, its friability, a most valuable quality, and one in which it is always, in a great degree wanting, is very seriously impaired, and to that degree that its normal condition cannot be restored until it has been subsequently subjected to the action of frost. I know of a large field in Culpeper county, Va., and another in Dutchess county, N. Y., which the owners of each admitted to me, that they had so impaired by tilling when too wet, that the soil did not fully recover for several years, and that in neither case did the soil seem to regain its original productiveness. The effect of tillage of such soils in such a condition of unfitness, is similar to that of puddling clay in the manufacture of bricks.

In case it is too dry when tilled, ordinary implements and ordinary tillage only breaks up the furrows into a mass of lumps, which, after they have lain a few days, exposed to the sun and air, will resist the wheel of a loaded vehicle, nearly the same as would a stone.

I have often seen soil planted in such a condition, and an unusual amount of labor bestowed upon the tillage of a crop, and an utter failure was the result; and yet, this identical soil, had it been plowed in a proper condition, would have yielded a full crop. On account of the practical difficulty of tilling with an ordinary team force, a large area of such lands, when its condition is just right, even with the best

management, a variety of implements have been invented, and are used, in some districts, with which to crush clods, but with the best of them the result attained is merely to crush the large clods into small ones, and a large proportion of the soil broken up by the plow in this condition, and manipulated as described, is as impermeable by the roots of plants as stones would be, hence, are scarcely more beneficial to the growing crop.

Thus it is obvious that a neglect to embrace the most propitious time for the tillage of such a soil, must necessarily result in great loss.

On farms of large area, the soil of which is mainly of the character that I have described, it is most judicious, in breaking a sward, to plow late in autumn or in winter, selecting a time for tilling when the soil is in the best condition practicable, that the pulverizing effects of frost may be availed of with the first crop of a rotation.

It will, however, be found most profitable generally, to devote such soils to grazing and hay growing, rather than to tillage crops, on account of the difficulties so minutely described. I shall next speak of a matter that many readers will no doubt say is too unimportant to be worthy of notice in comparison with the foregoing, or other examples that I may present in the sequel.

Although it is a branch by many considered minor, yet I hope to be able to make it appear that it is really momentous. It is this: on farms on which wood is used for fuel, it is a practice in many districts with which I am familiar, to haul wood to the house-yard, a load at a time, and to cut in into fire lengths, from day to day, as required.

On two occasions during the past summer, and often previously, I have heard a late breakfast for the farm hands, attributed to the "impossibility of getting it in season with such large green wood;" and I have known a man who was relieving harvest wages, to be detained a full hour in preparing wood for cooking, after the balance of the force had gone to the meadow. I have observed that farmers who *mismanage* thus, do not generally even provide a shed, under which to prepare the wood for the fire, which might be done with such shed in rainy weather, when labor can be had with the least interruption to the farm operations, and when time is least valuable.

Where this management prevails, it is common to find the pitiable wife and daughters overworked, unhappy, and thoroughly disgusted with living on the farm. The lady of the house will tell you she can keep no help, that the girls all protest against the inconvenience of everything at the place; and they may justly do so, for where we find the fuel managed as described, nearly everything else will be found to be conducted with little regard to convenience or economy. Such a household is utterly ignorant of the real comforts of a well conducted home. Discontent prevails, and the youth of both sexes are constantly seeking exodus from rural thralldom, and it is from this and similar causes, that the city is thronged, and a large proportion of the poverty and misery of our race is directly traceable.

Granting this and it cannot be denied, how important it is that a thorough reform should be instituted, and diligently promoted by every available means.

No means by which to reach the evil, and effect its speedy reform, occurs to me, from which we may reasonably expect more than that in which my feeble, but well meaning pen, is now engaged. If a

truthful expose of the prominent errors and most needed reforms on our farms are fairly, faithfully and ably portrayed on the pages of our Agricultural Journals, and the Agricultural Societies and Farmers Clubs will see that they are placed in the hands of every farmer's family, they will be read, especially by the youth, from whom we may expect most, and which is the class that we should especially strive to reach and relieve. In no part of our country with which I am practically familiar, can we find so many reading farmers and well educated youth, as New England and New York. There it is common to find several of the best agricultural, horticultural and floricultural periodicals of this country, and not a few of those published in other countries, on the reading table, and they are read too, and children there of twelve years of age are better posted in all that is progressive and useful in the arts, than young men and women are in districts in which such reading is not to be found.

The effect of intelligence and mental culture is potent in all that pertains to their homes and their farms.

One might ride many days in the district mentioned, and not find a single example of such management as I have described with fuel. The wood, where wood is burned, is cut, hauled, prepared for use, and properly stored under cover, and the annoyances and consequent losses, that I have described, that arise from the other system, are unknown in the better one.

The same is equally true with regard to much of the detail of the household and farm. The system under which the latter is generally managed, is more varied and multiform than is usual on large farms, and success in so manifold a system, depends mainly on the degree of industry and intelligence with which the whole is conducted.

To conduct a farm or plantation on which a single crop is made a specialty, does not require a tithe of the general intelligence that is required on one under a diversified system. This fact may in a great degree account for the higher standard of intelligence to be found in the small farm districts. Necessity develops the energies, and begets the intelligence, and the effects of it above described, the legitimate results. I devoted a month or more at mid-summer of the past season, to a long tour of observation in rural districts, and to enumerate one in ten of the numerous examples of serious neglect in the farm practice would furnish matter, and useful matter too, for a large volume. It is my present purpose to continue to write under the caption of this article, a monthly chapter for the successive issues of the "*Farmer*," hoping thereby, through pointing out the most glaring errors in husbandry, and suggesting the remedies, to aid in effecting the speedy reform, so much needed.

J. WILKINSON,
Landscape Gardener, Rural Architect, and Consulting
Agriculturist, Baltimore.

[TO BE CONTINUED.]

The Senior of the *Marlboro Gazette* says: "The reader will please give the Junior editor credit for all the descriptions of 'interesting games of Base Ball,' and 'splendid tilting at Tournaments' which have or may hereafter appear in the editorial columns of the *Gazette*. The Senior has long ago come to the conclusion that both these affairs should be superseded by 'Briar Hook Associations,' 'Plowing Matches,' or something where a commendable rivalry may be made useful."

For the *Maryland Farmer*.

POTOMAC FRUIT GROWERS—OCTOBER.

The October session of this intelligent and enterprising society, was held on the regular day, (the first Tuesday of each month,) and was one of more than usual interest; Chalkley Gillingham, president, in the chair, and Mr. Fulsom, Secretary. The meetings are held monthly in Clagett's Board of Trade Rooms, where the public and visitors are always cordially welcome.

After reading and approving the minutes of last meeting, Maj. J. H. King distributed to the members interesting papers on fruit growing.

Prof. Wm. Sanders, of the Agricultural Department, moved that the meeting on the first Tuesday in February, be the time for the winter exhibition and display of fruits, which was agreed to, when a fine presentation of apples, pears and other fruits is expected. Others than the society are invited to be present with their rich products, and brief accounts of their manner and success in keeping, and history of the varieties.

Mrs. Hetzel, of Va., exhibited a new form of fruit crate or box, for market purposes, recently patented by some one, which is cheap, and the society propose to try it and report.

The Persimmon was discussed; some favoring its improvement as a useful fruit—the American date—others opposed it, as being a breeder and harbor of worms and caterpillars.

A large and beautiful display of choice fruits, in variety, graced the tables—apples, grapes, peaches and pears. The principal exhibitors were, C. Gillingham, John B. Clagett, J. T. Bramhall, H. C. Williams, Mrs. D. M. Lawrence, George G. Ely, D. O. Munson, S. H. Snowden, J. L. Smith, Peter Carroll, and J. B. Bryan. Mr. Carroll showed a squash, of 121 lbs.

Late peaches, in sound condition and good flavor were particularly noticeable.

Mr. Saunders referred to the Duchesse de Bordeaux pear as promising well for late yield—a great want in this vicinity.

The meeting closed after an able theme, from Chalkley Gillingham, upon Insect Enemies to the Orchard.

It was thought that more attention to winter pears, and late apples and peaches, by growers in this region, is desirable, and would be profitable.

It is generally conceded by all that the use, generally, of more alkalies—lime and old ashes—around the roots of our fruit trees, will prove a preventive to insects, and promote the health of trees—applied either in the fall or spring—first removing the earth, then apply the lime or ashes, and again put back the earth.

D S. C.

NOTES, CLIPPINGS and COMMENTS.

BY THE EDITORS.

ROADS.

We see in our Western exchanges a machine spoken of highly for making and repairing roads much more quickly and cheaper than can be done by plows and scrapers. It is said this "Wauchope Scraper" will do more and better work with \$200 than with \$1,000 the old fashioned way. It would be well for our Highway Supervisors to inquire into it. These machines are made in Chicago.

GREAT IMPROVEMENT IN THE MANUFACTURE OF ARTIFICIAL ICE.

The new and improved ice-making machine, called "*Tellier's machine*," produces ice rapidly at a cost of from five to twenty-five cents per 100 lbs, according to the size of the machine. In noticing this curious and valuable discovery, the "*Rural Southerner*," one of our valued exchanges published at Atlanta, Ga., A. C. Van Epps, editor, makes the following remarks:

"It is probably in the transportation of meats, fruits, and vegetables, that this invention is to affect its most important results. Fresh meats in railway cars, and in ocean steamers, can be transported thousands of miles, and be in better condition for cooking at the end of the route or voyage than when loaded for transportation. Beef from the pampas of South America, from the great grazing lands of Texas, and buffalo meats from the Western prairies, must become greatly cheapened for consumption in the great markets of America and the old world. The transportation of fresh fish, including oysters, will no longer be one of preservation on the route, but of expense in conveyance. Fruits otherwise perishable, can be transported around the world in good condition, if kept at a temperature just above the point of freezing. For reducing the temperature in hospitals, where heat is so often death to the feverish patient, this process is of great value; while its most agreeable uses to cool and purify the hot and contaminated air of crowded theaters and other places where assemblies congregate can be well imagined. So great and various the uses of this process are likely to become, that they are now beyond description or conception, and must be left for time to suggest and develop."

DESTRUCTION OF CATERPILLARS.

The following items are translated from *Le Journal de l'Agriculture*, by our French correspondent:

The French "*Journal de l'Agriculture*" publishes the following lines, curious enough not to pass unnoticed, and which relate to the destruction of caterpillars in the gardens.

Caterpillars, other than those that attack the trees, cause great damage in the gardens. A farmer says that his cabbages were devoured by them, when some neighbor gave him the advice of fighting them, by making use of ants.

There are in all forests, especially pine forests, swarms of ants. This farmer sent for some, and his servants filled a large sack with these swarms, which were spread over the cabbages. The ants

began at once to chase; they would seize a caterpillar near the head, and would not let it go any more. At the same time the other caterpillars, as if they had understood the threatening danger, would make a hasty run. The next day there was not a single caterpillar to be seen in the cabbage bed. You could see them hanging by swarms at the walls and dying.

Without guaranteeing the process, we thought it useful to indicate it as it is easy to make use of where ants are to be found.

LATEST FASHION IN PARISIAN LIFE.

A picturesque innovation in Parisian fashions is the *Retreat to Cress places*.

Last summer, says the "*La Liberté*," the greater part of the class of invalids rushed to the environs of the river la Marne, or in the villages on the shores of la Seine, where are the cress-beds which supply the markets of Paris. They go there now to eat cress, like others go to Saratoga or Pyrenees springs, to drink water.

For centuries, tradition calls cress the *life* (or health) of the body; but recent cures of stomach diseases, contracted during the long and debilitating months of the siege of Paris, have given to that herb a new popularity. It is now the sensation of the day.

Pamphlets sing its wonderful properties (or virtues) on all tunes; prospectuses indicate it to sick persons of limited means; and finally large bills on the walls of Paris, announce in a pompous style:

THE CRESS SEASON.

A few words of statistics: 1000 cress-beds established in the environs give yearly to Paris alone twenty millions of cress-bundles.

STEAM CULTIVATION.

The extension of steam culture in Europe is somewhat surprising even to those who have given the subject some attention. John Fowler, the father of this system, after spending \$350,000 in experiments, had nothing to show for his expenditure of brains, labor, and capital, but a lot of old useless machinery. But the principle for which he contended has since his death, been fully established. The superior cheapness and efficiency of steam plowing was established in 1858. The extent to which it is practiced in England may be seen from the fact that there are establishments in that country employing twelve hundred men in the manufacture of steam plows.

The Pacha of Egypt employs four hundred of these steam plows. In Germany steam culture has revolutionized agriculture. In England it is stated that five hundred steam plows are held by individuals and companies for hire. A track of five hundred acres, near London, which would not bring a rent of \$3 per acre, after being steam plowed brought a clean profit of \$18,000 on grain crops. In Scotland steam plowing is also becoming common. We have no doubt that it is destined to secure as great results in this country as in Europe.

THE EGG TRADE.

The receipts for New York city for nine months of 1869 averaged one thousand barrels per day. A barrel contains some eighty dozen, or 960 eggs; the aggregate, therefore, was in one day nearly a million. One thousand barrels of eggs, at an average price of 30 cents per dozen, amounts to \$24,000 per day, or \$8,709,000 per annum.

THE
MARYLAND FARMER,
A STANDARD MAGAZINE.

EZRA WHITMAN,
Proprietor.

Col. S. SANDS MILLS,
Conducting Editor.
Col. W. W. W. BOWIE,
Associate Editor.

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Maryland State Agricultural and Mechanical Association.--The Rooms of the Society for the present are located at the corner of Charles and Lexington streets, Baltimore, where Farmers and Planters of this and other States are cordially invited to call whenever they may visit the city.

GEO. S. BROWN, *President.*

D. C. TRIMBLE, *Gen'l Secy.*

Washington County Fair.--This Fair commenced on the 15th of October, and continued four days. The display in all the departments were of a fair character, and came up fully to the one of last year. We have not been able to secure a list of deposits or award of premiums. We may refer to it more in detail in our next.

Carroll County Agricultural Fair.

The Fourth Annual Fair of the Carroll County Agricultural Society begun on the 30th of September and continued four days. The weather was agreeable and cool. The attendance was large, and the Exhibition emphatically a success. The display of horses and cattle was very creditable to the exhibitors. Alderneys prevailed in numbers, among which those of Chief Marshal Slingluff were highly conspicuous, and Mr. Dukehart had some very fine Durhams, besides other Short Horns offered by other breeders. The show of hogs was good, though not many; mostly Chester hogs were seen. Two or three pens of Southdown sheep, and some Shropshires, were all, but they were excellent specimens of their breeds. There was a fair show of poultry of different kinds, including a four-legged chicken.

The agricultural implement department was well filled, and we noticed among other new implements a hominy machine by Wagoner & Matthews, and a convenient seed sowing attachment to the common sulky rake; this was the work of Mr. Harman, a machinist in Westminster. It will prove very useful to the farmer in sowing seeds, especially in re-seeding old meadows, or sowing among wheat when it is not desired to cover the seed with a drag or heavy harrow. Thus the farmer has a sowing machine and rake for stirring the land at one and the same operation, or either can be used separately.

The vegetable tent displayed fine cabbage and roots, with enormous pumpkins and potatoes; and at the store of Mr. Haine's, in the village, we saw the finest Honolulu squashes we ever expect to see; they were four or five long, and weighed from 60 to 70 lbs.

The ladies' department was replete with all the various sorts of handiwork for which womankind are noted, and reflected the highest credit upon the skill and industry of the ladies of Carroll, giving assurance to a bachelor that it is a land in which to search out a frugal, notable and accomplished companion, who will know how to cater to his most fastidious wants. There was one day not less than 5,000 people present. The trials of speed were particularly exciting and attractive.

Loss of Fine Cattle.--We regret to learn that Mr. Coffin, of Muirkirk, Prince George county, Md., has, since the Maryland State Fair, lost his splendid bull, 6th Earl of Oxford, who took first premium, and was valued by his owner at \$2,000. Mr. C. also has lost the beautiful white calf which was calved on the Pimlico grounds the night before the Fair opened. He thinks both deaths attributable to exposure and travel during those cold and inclement days just preceding and succeeding the Fair.

Allegany County, West Virginia and Pennsylvania Fair.

The Fair of this association was held near the "Mountain City," on its well arranged Fair Grounds, commencing October 1st, and continuing four days. The opening day was bright and beautiful, and the attendance proved quite as large as on the first day of the exhibition last year. The second day's attendance increased on the first, and on the third day there was a general outpouring of the city and country people, many of whom were from Pennsylvania and Virginia.

The exhibition of Cattle was fair—among which were a number of Short-horn Bulls, Cows, Heifers, and Calves. F. R. Seymour took the premium \$20 for the best short-horn herd. G. W. Rawlings took the special premium for the best bull, without regard to age or breed, \$50, for Wellington; F. R. Seymour took special premium, \$50, for best milch cow, Annetta.

There were a number of fine Alderneys also on exhibition; among the depositors in this class were G. W. Darrows, H. G. Davis, R. H. Gordon, and others. The above named took premiums.

There were a number of fine horses, &c., exhibited—the following took premiums: Joseph Dilly, first premium, brood mare; best filly 3 years, do.; best jack, do. T. B. Davis' sorrel stallion Richard, took first premium; Fitzwater's stallion, black, second premium.

There were a few hogs presented, Mathias Eberlie taking first premium for Chester hog.

The Poultry Department was well represented by quite a collection of superior chickens, turkeys, ducks, &c. James Gross, Jr., took first premium for the best collection exhibited, not less than ten in number, \$10. Julian Thurston took second premium, for second best, \$5.

The deposit of Sheep was small, Mr Jos. A. Trimble and Jos. W. Wilson took first premiums.

The Household Department, fruits, flowers, &c., as well as Implements and Machinery, were not very largely represented.

The daily Trials of Speed excited the usual interest, but were not of a very extraordinary character.

The whole wound up with a Grand Carnival procession, which is represented as of a very ludicrous character.

Frederick County Fair.

The Frederick County Fair opened its Twelfth Meeting on the 15th of October, under the most favorable auspices of bright skies and the presence of large crowds of the manhood and the beauty of that region and other portions of the surrounding country. There was an unusually large display of

stock, poultry, household manufactures, and vegetable productions. The Indians attracted much attention, and the trials of speed proved immensely interesting.

The able and eloquent Address of General Wade Hampton we shall publish, at length, next month, the crowded state of our columns preventing our doing so in this number.

The display of horses was especially fine, and so it might be said of the cattle; the Alderneys were out in great force, as also the Durhams. Mr. John Merryman's herd of 12 Herefords carried off all the premiums in that Class. Messrs. Shriver & Preston, and Col. J. Stricker Jenkins, of Baltimore, took most of the premiums for Alderneys. Mount St. Mary's College was highly successful with the Short Horns. Mr. J. Snouffer and Mr. Haryate were the owners of the best Devons.

The Fair was certainly a great and decided success, and the Association bids fair as it increases in age, to multiply its numbers and increase in usefulness and popularity. The arrangements were all excellent, for which the officers deserve great credit.

Annual Fair of Kent County Agricultural Association, No. 1.

The first annual Fair of this Association was held on Tuesday and Wednesday, October 1st and 2d, upon the Society's Grounds, at Hawkin's Park. There was a fair display of stock, implements, domestic articles, fruits, vegetables, fine poultry, &c. The attendance on both days was very good. The weather being agreeable, there were many ladies among the visitors, who found an ample variety to interest them in the display of household goods and in other departments of domestic industry. The display of horses was excellent, and included some of the best thoroughbreds in the State, while the specimens of cattle, sheep and hogs were highly creditable. The display of fruits, flowers and vegetables were numerous. The peaches, apples and pears were very superior. Among the fruit was a splendid specimen of White Heath, grown by Col. Ed. Wilkins. Mr. R. S. Emory exhibited fine specimens of Duchess De Angouleme and vicar of Winkfield pears, one of the Duchess weighing 1½ lbs., another 18 ounces. Wm. H. Steuart took premium for pears; W. W. Stephens took premium for peaches. The \$100 silver cup offered by Col. Wilkins for the best 3 year old Roan Chief Colt, was awarded to Jos. Catlin, of Queen Anne's county. The trials of speed was an attractive feature of the exhibition, and the contests were spirited and exciting.

A prosperous merchant has for his motto:—"Early to bed, and early to rise, never get tight, and advertise."

ROAD CONVENTION.

The Convention reassembled at Raine's Building on the night of the 10th of October, but owing to its being the night of the grand torch-light procession, only a few members presented themselves in the Hall.

After calling the Convention to order the chair made some remarks, expressing its surprise at the apathy and indifference of the farmers of Maryland to a subject of such vast importance to them, individually and collectively.

Mr. Wm. Webster was appointed Secretary, and Mr. D. Lawrence read the report of the Committee, and delivered some very appropriate remarks.

Judge Mason, in a conversational way, expressed his views on the subject of roads, and other matters of vital interest to the farmers, which were listened to with great attention, after which, on motion of Dr. Merryman, the report of the Committee was laid on the table, and the Convention adjourned to the first Tuesday in December next, at 12 o'clock, M.

National Short Horn Convention.

A National Convention of Breeders, (Short Horn Cattle,) is called to meet at Indianapolis, Indiana, on the 27th of November next. The movement originated with the Indiana breeders, who met in a State convention, and adopted a series of resolutions expressive of the good that would result from a Grand National Convention of Short Horn Breeders of the United States and Canada, and appointed a committee of three to correspond with prominent breeders throughout the country. The committee consisted of Claude Matthews, Gen. Sol. Meredith and J. G. Kingsbury. On September 19th the Kentucky State Convention of Breeders of Short Horn Cattle met at Lexington, and endorsed the call of Indiana, and appointed a large committee to represent that State in said convention.

EDUCATION.

Thorough and general education is a good insurance policy, for property and peace, in any community, and cannot be ignored with safety, to public or private weal; and the popular New England system has always justly been admired; but then there are exceptions, you know, and it is certain, from the following, cut from an Eastern paper, that all knowledge will not die with the going out of New Hampshire:

"NORRIS.—Know kow is aloud in these medders, eny men or women letten thare kows run the rode, wot gits inter my medders afosed shell have his tail cut orf by me, Obadiah Rogers."

LIST OF AWARDS IN CLASS 5.

The following Premiums, in Class 5, were omitted under the general Premiums awarded at the late Maryland State Fair, in consequence of the Committee not reporting until after the Fair was over:

Best Portable Steam Engine, \$40, Page & Co., Baltimore; second best, \$20, Wm. E. Tanner & Co., Richmond, Va.; Iron Farm Mill, for grinding shelled or threshed grain, \$5, to Wagoner & Matthews, Westminster, Carroll county, Md.; Circular Saw, for Steam or Horse-Power, \$5, to Page & Co., Baltimore; do., for Hand or Horse-Power, diploma, Chas. Shultz; Wood Saw, \$10, to Page & Co., Baltimore; Shingle Machine, \$5, Page & Co.; Stave and Shingle Machine Combined, \$5, John Wambaugh, York, Pa.; One Steamer, \$10, R. Sinclair & Co., Baltimore; Corn and Cob Mill, Young America, first premium, \$5, E. Whitman & Sons, Baltimore; Cucumber Farm Hand Pump, \$3, E. Whitman & Sons; Water Ram, \$3, Parlor Fountain, diploma, Water Wheel, \$5, Garden Engine, \$3, Wind Mill, diploma, Display of Pumps, \$10, Deep Well Pumps, for Hand and Power, \$5, all to Wm. Dunnett, Baltimore; one Emerald Cook Stove, \$5; Champion Fire-Place Heater, \$5; Regal Base-Burning Stove, \$5; Minor Range, diploma; Triumph Stove, \$2; Carrollton Stove, diploma; Virginia Cook Stove, diploma; all to James Armstrong, Light Street, Baltimore; Washer and Wringer, \$5, George W. Craig & Co., Frederick, Md.; Clothes Wringer, \$2, Griffith, Baker & Bryan, Baltimore.

PUBLICATIONS RECEIVED.

"MINNESOTA: ITS RESOURCES AND PROGRESS, ITS BEAUTY, HEALTHFULNESS AND FERTILITY: AND ITS ATTRACTIONS AND ADVANTAGES AS A HOME FOR IMMIGRANTS, WITH A MAP."—This is the title of a pamphlet published by the Governor and Officials of the State of Minnesota. It seems to be very carefully prepared, and is just the sort of work which should be published and widely circulated by every State which courts immigration. The people of Europe want light as to the relative advantages of the different places offered for settlement in this country.

THE "BULLETIN OF THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS" FOR SEPTEMBER.—This is an able quarterly, devoted exclusively to the wool interest of this country, and is highly valuable to the sheep breeders as well as to the manufacturers of wool. It is full of statistics and important facts. Published in Boston. Edited by J. L. Hays.

THE DEPARTMENT OF AGRICULTURE: ITS HISTORY AND OBJECTS: By James M. Swank, Chief Clerk of the Department. This little work we look on as official, and therefore its statements are to be considered correct, or ought so to be. We think it a useful manual for those who desire to familiarize themselves with the objects had in view by Congress in erecting this Department; and it will no doubt tend to popularize the institution with the masses, who yet seem not to comprehend the full value of such a department of the Government to the agriculture of the nation. Some of our cotemporaries have severely criticised the author for one or more personal allusions, but as we know nothing of the particulars we decline any expression of our views. We only look to it as a historical detail of the working of a new branch of the Government, de-

signed to foster the great interest of agriculture in all its varied connections and ramifications, and for this purpose we think it well worth perusal and serious thought, being highly suggestive of important questions.

THE MONTHLY REPORT OF THE DEPARTMENT OF AGRICULTURE FOR AUGUST AND SEPTEMBER—Is perhaps the best number of the series ever issued from the Government Printing Office. It contains among other interesting articles—the Address of the Commissioner of Agriculture at the Minnesota State Fair, and also his Essay on Agricultural Implements. Also, an instructive Correspondence on the merits of Northern and Southern Farming, between Judge Watts and the Beech Island Farmers' Club in S. C. These Reports, as highly as they may be thought of, are in our judgment out of place, as usurping or interfering with individual enterprise. The Annual Report of all the Department has accomplished and learned from correspondence, during the year is right, and ought to be published. Also, (as was originally designed,) a *semi-monthly*, not *bi-monthly*, Report of the State of the Crops, the Weather, Markets, and Conjectures from Facts as to Foreign Demand and Supply, for the guidance of the farmer in forwarding or holding back his crops, should be issued promptly every two weeks, and nothing more added than what is necessary to keep the farmers posted as to the value of their products, which value ought to be regulated, not by "rings," but by the demand and supply, based on true statistics of abundance or scarcity of the article in proportion to the demand for it. That was the great object in starting this Government *bimess-trial report*, not that it should rise to the dignity of a Journal, and by the power of the Treasury of the United States, push from his pedestal every agricultural monthly which has to depend for its circulation on its subscription list, composed of men who have their choice, to pay \$2 per year for an agricultural paper, or get one gratis from the Government. It is obvious in the contest the Government paper would have a large circulation, and one damaging to the success of its rival, which demanded \$2 per year for the knowledge it imparted.

RECEIVED.

The Premium List of the Old Wilkes' Farmers' and Mechanics' Association, which holds its Second Annual Fair at Washington, Georgia, the 5th of November, and continue four days. \$2,000 are offered in premiums.

Mr. John Saul's Descriptive Catalogue of Dutch and other Bulbous Flower Roots. Mr. Saul is a well known and long established Nurseryman, Seed-Grower, Importer and Florist of Washington City, D. C., and the originator of several new varieties of both flower and fruit plants.

From J. Bolgiano & Son, No. 28 South Calvert Street, Baltimore, their "Guide to the Cultivation of the Kitchen Garden and Catalogue of Seeds."

From Messrs. R. H. Allen & Co., their Descriptive Catalogue of Live Stock of every Description, both Imported and Home-bred—New York.

From Wood & Hall, a Catalogue of Select Flowering Bulbs for Fall Planting of 1872. Also from same firm, a Trade List of Nursery Stock, Seeds, Bulbs, &c. Geneva, N. Y.

From E. J. Evans & Co., York, Pa., their Fall Trade List of Trees, Flowers, Shrubs and Bulbs.

THERE IS TRUE ECONOMY IN GOOD ROADS.

The *Farmer*, published at Chautauqua, seems to understand the great advantages of good roads, and the curse of bad ones. We don't know how it is in his region, but down this way we have some roads that are vile enough to make a modern Job utter words that might smack of blasphemy, but we are taking steps, through our Road Convention, to remedy this evil, and thereby make men, and women too, happy Christians. There is nothing that will tend so powerfully to civilize and Christianize our people as good roads. Hear the Chautauqua man:

"There is no economy in 'saving at the spigot and losing at the bung.' There is no economy in parsimony in road making, and paying treble or quadruple to wagon-makers, blacksmiths and harness-makers. Uneven road-beds, gulleys and boulders tax a man more heavily in purse, and are more vexatious to spirit, than his part of the cost of constructing and maintaining a road as 'level and smooth as a barn floor.' Men don't get rich, or are a long time getting rich, just because they don't begin right. What is the use of toiling to save crops, if a share of the profits is lost in getting them to market? A man starts to his nearest town with a ton of hay, from which he expects to realize \$10 to \$15. He runs into a gully, tips over, and a half a day is lost to himself and team in getting straightened up; or he loses a tire, breaks some part of his wagon, or casts a shoe, because of a boulder or something else that shouldn't be there—out comes his purse for repairs, and away goes an hour or more of his time! But the cost and loss of his time is not all—he gets fretted, worried in spirit, and becomes exceedingly unamiable, boorish and bearish. And this last is no first-rate evidence of his civilization—traced back to his imperfect road bed. A poor road in a populous community costs enough incidentally (and accidentally,) in the course of twelve months—shall we say it?—to macadamise its whole length, and to give something almost as durable as the 'everlasting hills.'

Our old system of road working needs alteration. It does not meet the wants of the people to-day. It is too antiquated and too imperfect to be recognized as in harmony with the spirit of the age. It needs thorough revision. What scholar and philanthropist can devise a system that will combine thoroughness of structure, completeness of detail, and no waste of the people's money? Such a man will be the benefactor of the rural districts, and as justly entitled to reverential memory as any inventor of the age."

For the Maryland Farmer.

LIME AND PLASTER.

After so long a time, and so much intelligent observation, guided by the best light that science offers us, how little do we know of the way our soils are improved by lime and plaster. We do as that eminently practical person did with his muck, who said, "I puts it on the land, and I lets the land and muck settle it." Only the faith in these improvers is not so general as it should be, and we fail to get the good of them because we do not understand them. There is nothing, however, to hinder the making of careful experiments, which would determine the value of both lime and plaster for every locality, and it is the part of plain prudence to ascertain the fitness for our own use of agents that have been so eminently useful to others.

The opinion of these fertilizers expressed by so intelligent an observer as Mr. Greeley, in his late address at Baltimore, will attract unusual notice.—So far as our own observation and experience go we agree with him entirely in his comparative estimate of lime and plaster. The common form of lime has been assumed too generally, we think, to be the only sure foundation for a lasting amendment of the soil, and only the cost of a sufficient dressing has restrained many from the use of it who have no assurance of its value for them beyond the fact that it has proved valuable to others. Mr. Greeley has no such opinion of lime, but on the other hand seems to depreciate it unduly. We cannot assent to his low estimate of its value, while we have in mind large sections of our own State that owed their long continued productiveness almost exclusively to the judicious use of lime. Let us allow its full share of merit for such lands, while we reserve our judgment of it elsewhere till duly tried.

That plaster or gypsum is more generally valuable we agree with Mr. Greeley, and with him urge its freer use where it can be had so cheaply as in Maryland, wherever it is not known by experiment to be useless. Certainly where it acts at all we have no fertilizer that compares with it in valuable results for the same cost. It is the more valuable, too, that it is not so much in direct money profit that it serves, as in the production of what still further benefits the land—clover and kindred growths.

Yet in most of our crops, we may find in it this direct profit if we would use it. Corn, tobacco, potatoes, cabbages, and indeed almost all, except the small grain crops, are benefitted largely. An experienced potato grower says he would as soon dispense with any other manure or fertilizer as plaster, and that it is without exception, and as a matter of course, applied to every crop. We know that

no tobacco grower in Southern Maryland—how it may be elsewhere we cannot say—is willing to dispense with the small application to the bud after weeding, some sow broadcast white preparing the land, and some again make a second application as the growth advances. On corn it is used very commonly with the seed in preparation for planting, and sometimes with great advantage after it gets some two or more feet of growth.

But while Mr. Greeley has little opinion of the use of lime generally, he acknowledges it may be serviceable on lands having an excess of acid, as indicated by the growth of sorrel and other acrid plants. We do not quote his words, having mislaid the copy of his address.

It surprises us, we confess, that so wide-awake an observer and reader, not to say writer, on farming, should utter such a thought at this day. Thirty years ago it was common enough, and it is well known how tenaciously it was held on to by the late eminent agricultural writer, Mr. Edmund Ruffin, of Virginia. But even he, we are credibly informed, yielded finally to the force of evidence, and abandoned his belief in the necessity of lime for the improvement of lands growing sorrel and other acid plants.

The palpable proof that lies against this theory is the well known fact that thousands of acres of just such land have been improved to the point of yielding thirty bushels of wheat and fifty of corn to the acre, without the use of lime, or of any other improver than clover, and the very light sprinkling of plaster necessary for its growth. If these acid plants indicated a deficiency of lime, it is not possible that such crops could grow, and continue to grow upon them through a long series of years, (for such is the fact,) under favorable circumstances.

It may be quite true that sorrel will disappear from some lands under lime treatment, should that happen to be what the soil needs, and general improvement results. The same result takes place with whatever improves the soil, and brings in a more wholesome, natural growth. But as sorrel is no indication of the deficiency of lime in the soil, it can of course be no guide in its application.

The truth about the acid is, that it is not perhaps in the soil at all, but that the several plants elaborate each its own.

MARYLANDER.

CORN COBS FOR POTASH—The availability of corn cobs as a source of supply for potash has been suggested. Analysis has shown that these contain over seven and one-half parts in 1,000 of carbonate of potash, or twice as much as the best kind of wood. In consideration of the average production of corn in the United States, it is estimated that nearly 52,000 tons of carbonate of potassa may be annually obtained from this source, to say nothing of a considerable quantity of chloride of potassium.

For the Maryland Farmer.

THE PEACH—NEW VARIETIES.

The Peach interest of our State having enlisted the earnest energies of a great number of intelligent cultivators, has grown to such magnitude that it is hardly second in importance to any of the products of our farms. There is no country in the world where the Peach is grown in such great quantities as in the States of Maryland and Delaware; thousands of acres are devoted to this crop for the supply of the markets of New York, Philadelphia and Baltimore; large growers, raising 10, 20 and 100,000 trees of different ages, and send yearly to market as many baskets of fruit. Maryland is peculiarly adapted to the cultivation of the Peach; location, soil, and climate, combine to make her eminently excel in the production of this delicious fruit.

Penetrated by the Chesapeake Bay, with its numerous large and navigable branches, running in every direction, transportation is made easy and cheap to Baltimore, which, in consequence of its very large packing interests, is one of the best markets in the country; whilst her Railroad connections enable the dealers to send the products of our orchards to all the principal cities and towns of Central Pennsylvania and New York. The dealers from Washington City are also making very large purchases in Baltimore for the supply of their markets.

That our soil and climate are unequaled, is proven by the superior excellence of our fruit. China and the United States are the only temperate countries where the Peach and Apple both attain the highest perfection in open orchard culture. The Peach is never raised in England, and not generally in France without the aid of walls. Even at Montreuil, near Paris, a village whose whole population is mainly employed in cultivating the Peach for market, it is grown entirely upon white-washed walls. The Peaches of Pekin have long been celebrated as the largest and best in the world, but a recent traveller from this country says they are not near so good as those raised in New Jersey.

It is a curious fact in the history of the Peach, that whilst it is a native of Persia and China, and was brought first to Italy in the time of the Emperor Claudius, and was considerably cultivated in Britain as early as 1550, and was introduced to this country by the early settlers near two hundred years ago; yet it is to a skillful and intelligent orchardist of England of the present day, with her unpropitious clime, that the American cultivator is indebted for the production of more valuable new varieties than he has received from any other source. Mr. THOMAS RIVERS, of Sawbridgeworth,

Herts, England, has six acres of land under glass, devoted to the cultivation of Grapes, Plums, Apricots, Nectarines, and a very large proportion to the cultivation of Peaches. These fruits are cultivated for the London markets, and are produced by him in great perfection, and command almost fabulous prices. Mr. Rivers, having his whole orchards of these fruits under glass, can control his operations in the production of new varieties without disturbance from storms or insects, the blossoms on every tree being entirely subject to his management, he can work understandingly, and make hybridous varieties, at his pleasure, without risk of extraneous influence. The few new varieties produced in this country are the result of accident, the pollen being carried either by storm or insects from one variety to another, and the seed of the Peach from this bloom thus impregnated, has by chance, produced a tree. This rarely occurs, and when it does the fruit is probably like something that we have already, or not so good as the original, without any change in the time of ripening.

Mr. Rivers has been engaged in this business near twenty years, and has produced a number of new varieties. The Salway, a very superior late Peach, now generally cultivated, and very highly esteemed by growers and packers of fruit, was produced by him, beside several other varieties of superior excellence of quality. But the peach-growers of this country are more interested in, and will be more particularly indebted to him, for his success in producing an early variety that is intrinsically good, than for one, however good, that ripens in mid-season.

In the Beatrice we have the result of his hybridizing his very superior Early Silver Peach, with the new White Nectarine, and it is all that the grower can desire in an early Peach, being, though rather small, of beautiful color, agreeable flavor, and a sound, healthy bearer, and possesses remarkable keeping qualities, ripening, whether with Mr. Rivers, under glass, or in this country, where it has been cultivated, fully two weeks earlier than Hale's Early, which has been hitherto regarded as the earliest Peach. He has two other varieties that are second only to the Beatrice, the Early Louise and Early Rivers, both of fine quality, and in ripening follow the Beatrice in the order in which they are named; and both are earlier than Troth's Early, which is usually cultivated as the best early variety. These new varieties of Mr. Rivers' have been imported by some of our enterprising peach-growers, and will furnish the lover of this delicious fruit an opportunity to gratify their taste much earlier in the season than they could have done but for the skill and enterprise of this intelligent orchardist of England.

EASTERN SHORE.

JAKOBB DUNK PAPERS
ON
FACTS, FILOSOPHY AND FARMING.

PAPER NUMBER XIV.

On Fertilizers.

At the close of a series of articles affecting to deal with the most important questions relating to the agriculture of the southern country, it does not appear proper to overlook the one which stands among those questions second in importance.

With twenty-five millions of dollars annually at stake, besides the incalculable crop interest involved, (that being the yearly trade in commercial fertilizers,) we shall be justified in giving the matter a careful investigation, and the writer brings to the work a desire for a just solution of the question, assisted by some experience in the manufacture, sale and application of manures.

I was riding by Jakobb's road field the other day; Dunk, jr., was harrowing the ground for wheat, and Jakobb was supervising operations from the top rail of the fence.

"Mornin', Joodge," said Jakobb, as I came in sight, and then went on with "what stuff ye goin' to put on wheat this fall?" and without waiting for a reply, he continued, "I bleeve the hull thing is a humbug."

"What thing is a humbug?" I asked.

"This yere fertilizer business," said Jakobb, "I've been kalkerlatin' up all I've lost in fertilizers for the last twenty years, and what the naburs is lost in 'em, and I've cum to the conclusion the hull thing is one big swindle; why, how much do you s'pose I've lost myself?" I thought of his crude processes and said,

"Five hundred dollars."

"It's more 'an a thousan'," said Jakobb; "take that one case I was tellin' ye of about the Orangecooler Company's Superfosfate; I put twenty-seven hundred on my lower medder, and never seen a particle of good from it from that day to this."

"Mr. Dunk," said I, "did you ever get cheated in buying groceries or cloth?"

"Heaps o' times," replied Jakobb; "that is, I used to git cheated when I was startin' like; it seemed to me when I begun fur myself that everybody got into me all around, but I'm too much fur 'em now; I go down to my old stand when I want anything particular, where I've been dealin' thirty years, and I git what I pay for; *they* wouldn't cheat me, they've got the reputation, and they're too onorable."

"Mr. Dunk," I asked, "did you have any of the superphosphate you spoke of analyzed to ascertain its impurity?"

"I put it all on the land," said Jakobb.

"Did you make any comparative test of its merit?" I asked; "that is, did you try it beside any other fertilizer, or leave any unfertilized portions of the land to test its merits?"

"Ef the land hadn't a wanted the stuff I would n't a put it on, and a man han't got time to chop his field up into little patches jes to see whether wot he buys is good or not; I didn't make no experiments," said Jakobb.

"Did the stuff get wet before you sowed it?"

"I put the wagon that had it on right under the shed when I came home; it was late then, but as it looked like rain, we backed the hull thing under

shelter, and sure enough it did rain that very night like all sixty; the roof wasn't very tight, and I s'pose some or it did git wet."

"How long did it stay on the wagon?" I asked.

"It rained several days, and then it was several days more 'fore I could git the ground ready, but that didn't hurt it," said Jakobb, somewhat doubtful about it himself, although he didn't know why.

"Mr. Dunk," said I, "your testimony against those parties in a court of law would not be worth anything, and they could get damages against you for slander."

"It's like they might," said Jakobb, with an exhibition of his boasted "spirit;" "laws is made now-adays jes on purpose to give rogues a chance to cheat honest people."

"Let us look at the matter fairly; in the first place the stuff must have got *very* wet, for your shed is *very* leaky, and if the water passed through or off it, the most valuable portion of the fertilizer—the soluble—went with it. This soluble part acts first, and its absence no doubt prevented you from seeing any immediate effect of the application; so important is it to keep an artificial fertilizer dry that I have known it shipped back to the factory after getting wet to be re-manufactured. The manufacturer of your stuff was not to blame because your shed was leaky."

(I have no doubt Jakobb has lost enough by that leaky shed of his to build half a dozen.)

"Then you did not try the strength of the land, nor any other fertilizer with it to see what the stuff would do, and besides, your land was worked when it was wet, and the baking that followed locked up in inaccessible clay balls a great portion of the virtue of the article, for which also the manufacturer was not to blame. To secure the best results from the application of a fertilizer, it is necessary for the farmer to obey certain rules concerning the cultivation of land, or results will be unsatisfactory."

"Land should be plowed deep—where it will bear it, drained where it needs it—subsoiled where it demands it, cleared of stones and roots, supplied with a sufficient quantity of organic matter, and worked at the proper time—this is the farmer's part; then the application of suitable mineral or inorganic manures will be followed by the best results attainable; to make this suitable mineral manure is the manufacturer's part, and I attribute a good deal of the outcry against manufacturers to a failure on the part of the farmer to do *his* duty in the matter."

"But, Joodge," said Jakobb, "look at the general failure year before last of Knaug's Raw Bone Unrivalled Superphosphate; everybody that tried it lost on it; *that* was a swindle; it did elegant fur two or three years, and then everybody bought, trusting to its reputation, and everybody got cheated."

"That immense frauds have been perpetrated upon us is undeniable; but when I see our own want of care and submission to these wrongs, I think we deserve something to spur us out of our apathy, although the stripes of experience in this, as in other cases, are hard to bear."

"Can't sumthing be done, Joodge?" asked Jakobb, with a tone expressive of great despondency; he had been sitting on the fence probably for an hour or two, thinking over the misfortunes of the past, until his burden appeared too great to bear.

"Yes," said I, "something *can* be done, but nothing *will* be done; we called a meeting to consider

these matters a couple of years ago, and nearly the whole county turned out, under the impression that they were going to get their fertilizers for a song, but after the question had been discussed in three or four meetings, and the Committee of Investigation made its report, there were not enough farmers present to make it effective; for to accomplish anything in this matter we must decide upon a course of action and work together; otherwise we waste our time in any preliminary measures, and as a consequence of this division of feeling among farmers, I see Knaug's, and other brands of swindling fertilizers,"—if you think that sounds pretty strong, Mr. Editor, come out into the country and let me show you the suffering families that have been robbed by these scoundrels—"are still upon the market; whereas, by rigid combination we could have subjected them to a punishment that would not have left them riches and revelry as the result of their roguery, but as farmers will take no steps to protect themselves from fraud, they must continue to be its victims; other vocations combine for this purpose, and reap the rich harvest which united labor brings to their garner, but farmers wander along singly, an easy prey to the hawks that hover around them. My recipe for all the ills which afflict farmers is—combination. If we could act together, relief could be secured, by

"1st. The purchase by all the farmers of a county of one article at the manufacturer's lowest cash price, under a bond and guarantee of purity; or,

"2d. The erection of suitable buildings in the county by a stock company, and the domestic manufacture of the fertilizers needed; or,

"3d. The encouragement by general patronage of a local manufactory of manures, subject to such supervision and guarantees as the farmers might see proper to impose.

"If either of these should not prove effective, the grand touch-stone—combination—would soon solve the question satisfactorily.

"I bleeve if we'd all leave 'em alone entirely," said Jakobb, "and go to limin', we'd bring the land up so 'at it would stay up; it's jes sinking so much money to have anything to do with these fertilzer men."

"That is a very common remark among farmers about lime, and I think they over-estimate the value of lime, and do not fully understand the nature of its action. Let us look at the quantity of lime in the different crops, and see what estimate they make of its necessity.

The ash of the grain of wheat contains only three per cent. of lime; the ash is two per cent. of the grain; hence one hundred pounds of wheat contain only one ounce of lime; twenty five bushels (1,500 pounds,) would require about one pound of lime; the straw for that quantity of wheat (say 3,000 pounds,) would require about nine pounds more.

The ash of maize contains 3 per cent. lime; the ash is under 2 per cent. of the grain, (1.42;) 50 bushels of corn (2800 lbs.) would require 21 ounces of lime; the stalks for this amount of corn (say 4000 lbs.) yielding 5½ per cent. of ash, which contains 10½ per cent. of lime, would require 23 pounds of lime.

The ash of oats contains 4 per cent. of lime; the ash is 3 per cent. of the grain; 50 bushels of oats (1300 lbs) would require 25 ounces of lime; the straw for this quantity of grain (say 2000 lbs.) yielding 5 per cent. of ash, which contains 8 per cent. of lime, would require 8 pounds of lime.

The ash of rye contains 3 per cent. of lime; the ash is 3 per cent. of the grain; 25 bushels of rye (1400 lbs) would require 20 ounces of lime; the straw for this quantity of grain (say 2500 lbs.) yielding 5 per cent. of ash, which contains 8 per cent. of lime, would require 10 pounds of lime.

The ash of barley contains 2½ per cent. of lime; the ash is 2½ per cent. of the grain; 40 bushels of barley (1920 lbs.) would require 20 ounces of lime; the straw for this quantity of grain (say 2500 lbs.) yielding 5 per cent. of ash, which contains 8 per cent. of lime, would require 10 pounds of lime.

The ash of buckwheat contains 3½ per cent. of lime; the ash is 1 per cent. of the grain; 40 bushels of buckwheat (2000 lbs) would require 11 ounces of lime; the straw for this quantity of grain, (say 1000 lbs.) yielding 6 per cent. of ash, which contains 18 per cent. of lime, would require 11 pounds of lime.

The ash of peas contains 4 per cent. of lime; the ash is 3 per cent. of the grain; 5 bushels of peas would require 6 ounces of lime; the ash of pea straw contains 38 per cent. of lime.

The ash of clover seed contains 6 per cent. of lime; the ash is 4 per cent. of the grain; 5 bushels would require one pound of lime.

Tobacco contains 25 per cent. of ash, which contains 37 per cent. of lime; 1,500 pounds of tobacco would require 139 pounds of lime.

Potatoes contain 4 per cent. of ash, which contains 2 per cent. of lime; 200 bushels of potatoes would require 9 pounds of lime; the tops contain 9 per cent. of ash, which yields 39 per cent. of lime.

Hence it will be seen from the following summary that the cultivated crops actually take up an exceedingly small quantity of lime:

	Lime.	
25 bu. wheat	and 3,000 lbs. straw	contain 10 lbs.
50 " corn	" 4,000 " fodder	" 25 "
50 " oats	" 2,000 " straw	" 10 "
25 " rye	" 2,500 " "	" 12 "
40 " barley	" 2,500 " "	" 12 "
40 " buckwheat	" 1,000 " "	" 12 "
5 " peas	.....	" 6 oz.
5 " clover seed	.....	" 1 lb.
1,500 lbs. tobacco	.....	" 139 lbs.
200 bu. potatoes	.....	" 9 "
1,000 lbs. cotton—fibre, seed and stalk	.....	" 35 "

So that an attempt to raise these crops on worn out lands by the use of large quantities of lime would not produce favorable results; they require just such articles as the commercial fertilizers contain, viz: superphosphate of lime, potash and ammonia. An application of these three articles in abundance, with the moderate quantity of lime indicated above, evenly distributed throughout the soil, and the other subordinate elements of plant food usually found in soils—chlorine, silica, magnesia, soda, carbonic acid, oxide of iron—will produce good crops on such lands, but an excessive application of any one article of plant food will not produce good crops under those conditions."

"Wot's the reason, then," said Jakobb, who had listened very patiently—the rail he was sitting on was a broad one—to these remarks which I was prepared to make from my own investigation of the subject, "that them Pensilvany farmers git sich big crops from their land? They don't use sich quantities of fertilizers as we do, but sites o' lime, and they beat us every time."

"I think I can tell you; the ash of red clover is 7 per cent. of the hay; this ash contains 35 per cent. of lime; in 2000 lbs. of clover hay there would

be the large proportion of 50 pounds of lime; the ash of white clover contains 32 per cent. of lime; lime not only contributes to the growth of grass and the cereals as a direct fertilizing agent, but by neutralizing acids in the soil, and effecting the decomposition of vegetable matter, it has also a chemical effect; another office of lime is the liberation of nitrogen from organic substances, thus preparing it for plant food; by its action on iron pyrites, sulphuric acid is produced which unites with it, forming gypsum. It also facilitates the decomposition of granite and felspathic rocks, which are prolific sources of potash and soda. With decaying vegetable substances it decomposes salt, forming carbonate of soda and chloride of calcium, and in this latter form is ready for plant food; its chemical activity in the soil by the liberation of gases, &c., necessarily produces aeration, and consequent modification of heavy clay soils; it also has a tendency to make loose, sandy soils more compact. By its physical effects in these cases bringing about conditions necessary for the best results in production. All this is in favor of lime; but we find in a reliable report of experiments that 'in the absence of lime a certain product weighed 340 grains; the result of the application of lime was perceptible in the addition of only 30 grains to this amount, making 370 grains as the result of putting superphosphate of lime, potash, ammonia and lime into burnt sand

"If in soil which contains no lime, and is capable of producing 340 grains, we add humus—mould—the yield will remain the same—340 grains; it lime is now added to the soil, the product is increased to 493 grains, and the result of these experiments is strikingly corroborative of the verdict which plants give of the necessity of lime as furnished by the figures previously given; hence the liberal application of lime, in addition to decaying vegetable matter, potash, superphosphate of lime and ammonia, will in connection with them produce large crops, but alone, as a fertilizing agent in the production of grain crops, it possesses small relative value.

"Now, Mr. Dunk," I concluded, "pile on your lime; but to make it pay you must also pile on your clover and grass seed, and commercial fertilizers, unless your soil is already abundantly supplied with organic matter and latent mineral substances, and that brown barren you expect to put wheat on does not appear filled with over-much fatness."

"But you haint told me what you was goin' to put on this fall;" said Jakob. b.

"I shall use an article of my own preparation from my own formula; of all modes of buying artificial manures I prefer this one. The crude articles can be purchased of some of the manure-makers who use the same articles in their own business. I have bought the phosphatic base—bone dust, Navassa Guano, South Carolina Phosphate—dissolved it in sulphuric acid, (47° and sometimes 65°,) and then added the necessary ammonia—in the form of Peruvian Guano, sulphate of ammonia, or animal matter—and potash—in the form of potash salts and muriate of potash. In this preparation I also put some plaster, (say a barrel to the ton,) my earth-closet and hen manure, and dry ashes, and a quantity of rich powdered dirt sufficient to absorb and fix any beneficial gases which might be evolved by the incorporation."

"To do all them things a man has to have lots of room, and a good barn to keep it dry in, and I havn't got that," said Jakob. b.

"The amount saved on each ton thus prepared would justify you in building a shed for the special purpose, and every farmer ought to have a barn; but if you are not prepared to make it yourself you have got to buy, and it seems to me any sensible farmer ought to know enough about buying to prevent himself from being cheated, particularly in a matter in which so much is involved; a safe rule is, *buy of men you know will not deceive you*; when there are men in this trade in Baltimore who make their articles right before your eyes; men with reputation and capital enough at stake to make them careful for their own sake, it appears strange that it is necessary for me to give you this advice, but until you can act upon it, I think you had better not buy at all—the risk is too great."

"Ain't this home-made phosphate you speak of the receipt that feller sold round here six or eight years ago? If it is, it kant be worth much, fur nobody makes it now."

The latter part of Jakob's statement was correct; out of several of my neighbors who have the receipt, I do not know one who is "making for himself;" partly on account of a want of sufficient chemical knowledge to properly prepare an efficient fertilizer, and partly because it is easier to dump the ashes out in a pile to be washed away, to allow the hens to roost in the woods or in trees, where their manure will not be available; to permit the house and barn liquids, and house manure to be wasted, than it is to make use of measures to save all these for application to the crops. It is easier to go or send up to Baltimore for a hundred or two dollars' worth of fertilizers, than to spend twenty in developing the farm sources of manure. Farmers exhibit in this fertilizer matter the same ignorance, extravagance and neglect which characterize their operations in other branches of cultivation. In the use of a domestic fertilizer I have never failed to secure good results, but it anything is firmly established in agriculture it is the fact that the liberal and judicious use of commercial fertilizers is one of the best investments a farmer can make.

"It's mighty drawin' on the land," said Jakob, "when Peruvian Guano fust kum about yere any of this land would bring a thousand of tobacco, and forty bushels of wheat, and eight and ten barrels of corn; now it won't sprout pig-weed without coaxing with a hoe, and some fertilize; I bleeve it exhausts the land kumpletely."

"It's wonderfully exhausting to a pair of old boots to wear them all the time, and never repair them, or to work an old horse and never feed him," I replied, "but give the land proper food at the right time, and it will give you no opportunity to complain of its exhaustion."

"Well," said Jakob, "give me your receipt and maybe I'll try it."

"If you are really desirous to make for yourself, go to Baltimore and spend a day among the fertilizer men; go all around; you will find them gentlemanly men, ready to give you all the information you will require, and then you will come home and send in your order to some one or more of them whose representations will have satisfied you without any desire to make for yourself—"

One word about mineral fertilization, and I will close. I subjoin a table of the proportions of the other principal elements of plant food by which the farmer can bring the application of commercial manures down to a question of figures after he has a correct analysis of the manure he intends to apply,

and such analysis he should receive (according to the laws of Maryland) with every bag or barrel he purchases.

Number of pounds (approximately) of plant food taken from the soil in the quantities specified—

Article.	Quant'y	Weight.	Ammonia.	Potash.	Phos. Acid.
Wheat.....	25 bus.	1500 lbs.	42 lbs	10 lbs.	15 lbs.
do Straw.....		3000 do	10	18	9
Oats.....	50 bus.	1500 do	38	7	9
do Straw.....		2000 do	8	22	4
Rye.....	25 bus.	1400 do	30	9	14
do Straw.....		2500 do	7	24	7
Corn.....	50 bus.	2800 do	34	12	19
do Fodder.....		4000 do	8	84	19
Buckwheat.....	40 bus.	2000 do	30	9	10
do Straw.....		1000 do	1	28	7
Potatoes.....	200 bus	12000 do	40	252	84
do Tops.....		6000 do	3		
Tobacco.....		1500 do		101	15
Cotton fibre, seed & stalk.....		1000 do		77	29
Clover Hay.....	2 tons.	4000 do	52	84	28
Timothy Hay.....	2 tons.	4000 do		70	18

NOTE.—Several years ago the writer, in a Convention called to deliberate upon questions affecting the interests of the agricultural community, advocated the necessity of requiring by-law, manufacturers and dealers in fertilizers to give bonds in a large sum to the State for the purity of their articles, and as the feature appears to be gaining ground, it is again presented to the guardians of the agricultural interest. It may be urged that the incorporation of this feature into the statute law, would embarrass competition; admitting that it would to a certain extent, would it not be better to have monopoly and security, than the free competition and fraudulent practices of the past?

KILLING BURDOCKS.—Burdocks can be killed at any age, no matter how young or old. Cut them off below where the leaf stalk leaves the root, and they will never sprout again. I got the information from an old Tennessean, twenty five or thirty years since, and have never known it to fail, if cut low enough.—*P. Underwood, Cass Co., Ill.*

STATICE LATIFOLIA.

We take pleasure in calling attention to this charming hardy perennial, well represented by the above illustration. The flowers are small, of a pale lilac color, and arranged very closely on wire like branches. The branches when dry have a loose spray-like appearance, and are invaluable for arranging in bouquets of natural or artificial flowers. We are indebted to Messrs Ellwanger & Barry, Rochester, N. Y., for the electrotype of our illustration.—This herbaceous plant is easily propagated from seeds, and should be found in every collection of choice flowers and shrubs.

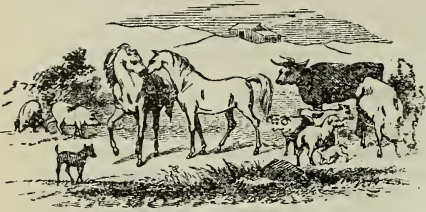
For mildew on rose bushes, dissolve a pound of soft soap in a gallon of rain water, and sprinkle the upper and under surface of the foliage with this solution.

KEEPING ONIONS.—The New-England *Homestead* give this information on the subject of keeping onions: "Onions will withstand far more cold than is usually supposed. If packed dry in tight barrels, and all interstices filled with chaff, they may be kept in a barn, or where they will freeze quite hard, and not be injured, provided the barrels are closed tight and not opened until the onions are again thawed. Onions stored in a warm cellar are very likely to sprout in the winter, and then decay, emitting anything but an agreeable odor." By adopting a mode similar to this we do not remember losing this most excellent vegetable by decaying or sprouting. The disease by which they have disappeared—if disease it can be called—has always been by consumption.

VALUE OF NIGHT SOIL.—Liebig relates that in the fortress of Rastadt and in the soldiers' barracks of Baden, generally, privies are so constructed, that the seats open, through wide funnels, into casks fixed upon carts. By this means the whole of the excrement, both fluid and solid, is collected without the least loss. When the casks are full they are replaced by empty ones. The farmers about Rastadt and other garrison towns having found out by experience the powerful fertilizing effects of these excrements upon their fields, now pay for every full cask a certain sum (still rising in price every year,) which not only has long since repaid the original outlay, besides covering the annual cost of maintenance, repairs, &c., but actually leaves a handsome profit to the department. The results brought about in these districts are highly interesting. Sandy wastes, more particularly in the vicinity of Rastadt and Carlsruhe, have been turned into smiling cornfields of great fertility.



Live Stock Register.



A FEW SHEEP ON THE FARM.

The relative profit is much greater from a small flock than a large one. The grain farmer, no matter how few his acres, can make money by keeping a few sheep. There is always room for them somewhere, and they consume and turn into money food that otherwise would waste. But he must be careful not to overstock. To illustrate, suppose the farmer cultivates only eighty acres, raising grain chiefly. He keeps a few cows and the necessary teams. One-fifth of his farm is in pasture, one-fifth meadow; one planted, one spring grain, and one wheat. He thinks he has as much stock as he can profitably keep, but if he puts on one sheep to every five acres, he will find their products clear gain. In the spring, early, they can run on the sod which is to be planted, and one sheep to each acre will not hurt the land, yet they will live well. After that they can go into the pasture, and will clean after the cows to advantage. A run on the stubbles after harvest will not be felt, where each sheep has two acres, and in the fall there is plenty of feed.—Through the winter they can be kept well on what the other stock would not consume, with the addition of a little grain. Probably the most profitable are some of the coarser woolled, mutton breeds. Their lambs sell to the butchers for higher prices, and when fat, the sheep fetch as much as a yearling steer. Sixteen mutton sheep, well managed, would produce a yearly income of one hundred dollars, where, if none were kept, nothing would be realized. The greatest drawback is liability to loss by dogs; and it is a disgrace to any State to protect its curs so well that they expel, to a certain extent, the only animal which can cheapen the meat and clothing of the people.—*American Rural Home.*

CHARCOAL AND BRIMSTONE FOR SWINE.—In every hog pen there should be a trough, in which there should be deposited weekly, a quantity of charcoal. The hog eagerly devours this substance, and is greatly benefited and strengthened by its use. It prevents many unpleasant diseases, and contributes largely to the fatty secretions. A few spoonfuls of pulverized brimstone or flour of sulphur, in a little dough, should be administered as often as once a fortnight to swine while fattening.

CARBOLIC ACID FOR KIDNEY WORMS IN HOGS.

A correspondent of the *American Farm Journal* gives the following with reference to the cure of a fine hog by means of carbolie acid :

‘On the 20th day of February last I noticed that one of my hogs (a large Chester White sow) was a little weak in the back. On examining her I found that it was with great difficulty that she raised her fore feet in trying to walk. As I have had very little experience in raising hogs, I at once consulted a number of my neighbors. They all pronounced it kidney worm, and, of of course, each had a remedy. Some prescribed soap-suds, others weak lye, copperas, blue vitriol, turpentine, &c. I gave each a fair trial, with no good result; and on the 20th of March she laid flat on her side, unable to turn over, and had not been on her feet for more than ten days, when my father, Dr. Brown, handed me a bottle of carbolie acid, and told me to use it as follows: Ten drops once a day in drink, then put thirty drops in one gill of hot vinegar, and bathe the back over the kidneys once a day.

‘I gave her the first dose on Thursday, March 21.

‘On Sunday, the 24th, when I went out to feed, she raised to her feet and took two or three steps to meet me. By Saturday, the 30th, she was as well and sound as ever.

‘The same remedy is equally good in treating mange. First, wash the hog well with soap-suds; then to one pint of lard, while hot, add one ounce of carbolie acid, stirring it until it is cool. Rub the hog two or three times with this, and give yourself no uneasiness about the mange.’

EFFECTS OF GREASING HORSES’ HOOF.—A correspondent of the *Canada Farmer* writes: ‘I had an excellent opportunity of observing the effect of greasing the feet whilst working in a shop where horses were shod for a large undertaker’s establishment. The treatment of the horses by the horse-shoer was the same as that of hundreds of other horses shod at the same shop; but the feet of the funeral horses were greased every time they went out, to make them nice and black; and, as the fruit of this practice, the hoofs almost ceased growing. They were exceedingly dry and brittle. The sole was not hard and glossy, as feet are after paring, but of a dry nature, and could in many cases be easily crumbled down by the fingers,

HOW TO DRIVE A YOUNG HORSE.—In teaching a young horse to drive well, do not hurry to see how fast he can trot. Keep each pace clear and distinct from the other; that is, in walking, make him walk, and do not allow him to trot. While trotting, be equally careful that he keeps steady at his pace, and do not allow him to slacken into a walk; the reins, while driving, should be kept snug, and when pushed to the top of his speed, keep him well in hand, that he may learn to bear upon the bit, so that when going at a high rate of speed, he can be held at his pace, but do not allow him to pull too hard, for it is not only unpleasant, but makes it difficult to manage him.

USEFUL RECIPES.

V. P. Richmond, of Ill., in the *Germantown Telegraph*, gives the two following recipes, which he has tried to his entire satisfaction:

SLABBERS IN HORSES AND CATTLE.—It is only to feed *dry bran*, or meal if the bran is not at hand; two or three quarts will check, and a second feed will effect a cure in every case I have tried. We keep bran in the barn for that purpose, as it is almost impossible to put a work horse in our pastures without causing him to slabber.

WARTS ON HORSES AND CATTLE.—Anoint the wart two or three times, two or three days apart, with fresh, clean *hog's lard*. You will seldom be able to find the wart after the third application. It has the same effect on all kinds of warts, bleeding, large or seed warts. Two applications removed a hundred small warts a little larger than wheat grains from the mouth and nose of a colt of mine in about a week's time, and cured a bleeding wart on the side of another colt's head with one application.

BLACK TEETH IN PIGS.—The general cause of this disease is fever in the sow, caused by constipation. If you give the mother plenty of raw potatoes, or other vegetable diet, a week or two before dropping her pigs, so that she does not have any fever, and has a good flow of milk at the time, you will never have any black teeth in your pigs. If the sow is constipated when they are cutting teeth, they become feverish, and it gives them a runty appearance. Remedy, give plenty of cooling and laxative food.

FITS IN HOGS.—When a hog is attacked, dash bucketsful of cold water over the body, throw a purgative injection into the rectum, composed of six ounces of sulphate of soda, and two teaspoonfuls spirits of turpentine, in ten ounces water. Setons saturated with oil of turpentine may be inserted under the skin behind the ears, or the back of the neck may be blistered by actively rubbing in the following mixture: Spirits of turpentine and liquid ammonia, one ounce of each; powdered cantharides, two drachms. If occurring about midsummer, in hot, exposed situations, provide against it by allowing the pigs a sufficient shelter in a shed through which the air is allowed to circulate freely. Let water constantly be in reach of the animals, and if possible have a pool in which they can lay down when they choose.

RINGBONE IN COLTS.—In many cases it is caused by strains, owing to the hoofs growing so long that they severely strain the fetlock joint. The old saying that an ounce of prevention is worth a pound of cure, is true; and to use it let every man who has a colt be sure to have his toes trimmed short as soon as the ground freezes in the winter; keep them short, and I will guarantee him against all those calamities.

VOMITING IN CATTLE.—A gentle oleaginous purge may be given; and the animal's diet restricted to mashes, or such soft food as prevent the necessity of rumination, until the impaired or unnatural state of the rumen is succeeded by healthy action.—*From American Stock Journal.*

THE AMERICAN STOCK JOURNAL for October, contains a number of well written articles of great interest to the Farmer and Stock Raiser. Illustrated with Engravings of Model Stable, Short-Horn Cow, Berkshire Hog, Percheron Horse, Feed Steamers, Wild Animals, Fowls, Pigeons, Birds, &c. Every family should send for a free specimen copy, or \$1 for 1873, and get three numbers of this year free. Address, N. P. Boyer & Co., Parkesburg, Chester County, Pa.

The Poultry House.

For the Maryland Farmer.

LICE ON FOWLS.

Now that winter is about to set in, and poultry will be shut up, it is well to know how and to prepare for keeping them free from lice. There are several ways this can be effectually done.

Mr. Chas. E. Coffin, of Muirkirk, keeps a large number of different varieties of fowls, and has them all warmly sheltered during winter, so that they continue to lay eggs the year round; he keeps a quantity of charcoal dust, scraped from coal pits, in the poultry houses, with a little lime scattered around, and has no trouble from vermin.

Others effect the same by putting a little sulphur, as well as lime, about the perches and on the ground in the poultry house. It is also said that sassafras poles and chips will keep off lice.

The *Journal of the Farm* gives the following, which is cheap and easy of trial:

"Carbolic soap will certainly kill lice on fowls or chickens. We use Buchan's. Dissolve half an ounce in a quart of boiling water; when cool, wet their heads and necks with it. The lice die in an instant, and in half an hour the chickens are as dry and nice as ever."

Here are cures or preventives enough surely, and farmers must pay the penalty if they apply none of them. Fowls thrive much better if they have plenty of green food in the winter, such as cabbage leaves, onions, beets, turnips or potatoes, cut up fine—with access to plenty of sand, gravel and lime in their houses, scattered about on the floor or ground; this care will amply pay the trouble in eggs and health.

D. S. C.

CHOOSING HATCHING EGGS.

Eggs for hatching should be chosen of the fair average size usually laid by the hen they are from, any unusually large or small being rejected. Some hens lay immensely large eggs, and others small ones. A fat hen will always lay small eggs, which can only produce small and weakly chickens. Absolute size in eggs is, therefore, of but little importance. Round short eggs are usually the best to select; very long eggs, especially if much pointed at the small end, almost always breed birds with some awkwardness in style of carriage. Neither should rough-shelled eggs be chosen; they usually show some derangement of the organs and are often sterile. Smooth-shelled eggs alone are proper for hatching. It is a farce to suppose that the sex of a bird can be determined by the shape of the egg.—*Canada Poultry Chronicle.*

The Apiary.

FERTILIZING QUEENS IN THE HIVE.

It has heretofore been held that queens could not be fertilized except in the open air. This has been a serious drawback to the introduction of Italian bees, but this trouble now seems to have been obviated. Rev. E. Van Slyke, of West Farms, N. Y., in the *Bee Keepers' Journal*, gives two methods as practiced by his parishoners. Of the first, he says:

"His queen was hatched in a nucleus hive, and then having carefully looked it over to be sure that no tainted drone was present, or indeed, any drone at all, the entrance was so contracted as to positively prevent the escape of the queen, and yet permit the uninterrupted flights of the workers. About the eighth day after the queen was hatched, a dozen or more drones were introduced and the nucleus was left to itself; in a few days the queen was laying."

"The other method was this: The queen was hatched in a nucleus. On the eighth day was taken out and confined with a few drones in a box about three inches square. * * * *

"This box was placed over the nucleus, and in a few hours a dead drone was found that bore evidence of connection, and the queen, admitted to a hive from which she could not fly, way laying in a few days."

"The method practiced by Dr. Dax, of Guns, Hungary, is this: He confines, along with his queen, about one hundred bees. 'The glazed box,' he says, 'is then darkened, and between the hours of eleven and three a drone is added, when you may watch their intercourse. If this does not occur on the first day, which, however, is generally the case, it will take place the next day.'"

SUBDUING BEES.

The stings of bees were given them for the protection of their stores. They are not disposed to sting when not in danger, and every bee which does sting dies. Away from their own hive they rarely make an attack. The natural dread of stings deter many from keeping bees who would be glad to do so. In the use of modern hives the danger of being stung is lessened, as these give you facilities for subduing them. A bee with its honey-sac full never stings. When you alarm a colony of bees, they all instinctively at once fill their sacs with honey, and after time has been allowed them to do this, their hive can be opened and examined with no danger from their anger.—*Mrs. Tupper.*

It is a singular fact that wax is more rapidly and largely made by feeding the bees with dissolved sugar than from the honey they collect themselves; the sugar thus evidently containing more of its constituent elements.

Grape Culture.

A MARYLAND VINEYARD—WINE MAKING, &c.

Recently a number of gentlemen made a visit to the large vineyard of Mr. Chas. T. Schmidt, near Avalon, about a mile and a half from the Relay House, on the main stem of the Baltimore & Ohio railroad, for the purpose of inspecting the vineyard and the modus operandi of wine making.

The *Baltimore Sun* gives the following account of vineyard, mode of wine making, &c.:

Mr. Schmidt has a farm of 35 acres, 25 of which are in vintage culture, it being the largest vineyard, by far, in the State of Maryland. The vine fields are all upon hillsides, facing mostly to the southeast, in order to avoid the northern winds of winter. The grapes are planted in long rows, about four feet apart, and trained upon wire trellis. The vineyard has only been in operation five years, but the twenty odd acres have yielded about 200,000 pounds of grapes per annum, from which have been made each year about 11,000 gallons of pure wine. The season for gathering the fruit begins about the latter part of September, and lasts until the middle of October.

Mr. Schmidt keeps in employment about twenty men, women and boys, to gather the fruit, which is then conveyed to the wine-making establishment near by, placed in a press somewhat similar to the cider press, mashed and passed through a sieve, by which a man stands to remove all the stems. The bruised grapes are allowed to fall into the fermenting tub, where the mass is suffered to remain from five to eight days, when the juice is drawn off into casks, which are placed in a cool cellar, where the wine undergoes what is called a quiet fermentation. At the end of a year the wine, though young, is fit to be used. The mode of making white wine is somewhat different; the juice and skins are not allowed to ferment so long together, as the coloring quality of wine lies in the skin of the grape, and if white wine is desired from any but white grapes, the pulp and the skins have to be separated after a short fermentation.

Mr. Schmidt makes both white and red wines, the latter being in greater quantity. Mr. Schmidt has endeavored to cultivate many foreign varieties of grapes, as well as the California fruit, in his vineyard, but has failed, owing to climatic influences. The standard varieties cultivated are the Concord, Ives Seedling, Norton's Virginia, Hartford, Christine, Alvey, Rochester, No. 4, for red wines; Perkins' Rochester, No. 1, for white wines; The Iona and the Delaware, which make the finest quality of white wine. The Concord grape is cultivated more extensively than the other varieties, and the wine from it sells for \$1 50 per gallon. The wine from the Ives Seedling sells at \$2 per gallon, and Norton's Virginia at \$2 50 per gallon. Last year's vintage Mr. Schmidt has yet on hand in his cellars, together with some older wines, amounting in all to about 14,000 gallons.

Horticultural.

The New Strawberry Bush "Inexhaustible"—Its Cultivation and Fertility.

We are indebted to a Professor of French for the following translation from a French Agricultural Journal for the following remarks upon the new Strawberry, which is so different in its growth, so large as to be called a bush or tree, and so prolific that it is attracting the attention of the horticultural world :

As with all kinds of strawberries with large or small fruits, there are two seasons of the year favorable to the planting of the new Strawberry bush, to which its fertility has merited the name of Inexhaustible.

Its exceptional and superabundant yielding justifies the title given to that variety of the strawberries with large fruits.

This Strawberry bush must be planted from March to May, in the Spring; or in September, October and November, in the Fall. When planted in the Spring, it begins to give some fruit as early as June or July, and the production continues until frost.

When planted in the Fall, it gives fruit next Spring.

In both cases it is really abundant only the second year, *i. e.* the one following the year of its planting. Then flowers and fruits succeed each other without interruption.

Besides this, we must add that this Strawberry bush is one of the earliest we know. Well cultivated, strong plants will yield sometimes 170 and 180 berries.

This variety is very vigorous; it produces a greater quantity and larger fruit in damp (fresh) ground than in dry land. If it cannot be helped to cultivate it in a dry land, then, to obtain a permanent production, it must be watered during protracted droughts.

A distance of about 18 inches (45 centimetres) is necessary between the plants; the "coulants" (running branches) are to be cut as soon as they appear.

In Spring the fruit is slightly flat, and of a size above the ordinary size; during the remainder of the season it is more round; the fruit is full, delicious, succulent, juicy, in Spring; good during Summer and Fall; less colored and of less size in the late season.

The inventor of this variety is a Mr. Mabile (not the landlord of "Bal Mabile,") of Limoges, France. He sells the plants at the rate of two dollars (ten francs) a hundred, and one dollar for fifty plants.

We think it would be worth the while to acclimatize it in this country, where people are so fond of strawberries.

To have strawberries from early in Spring up to the first frosts would certainly pay.

Floriculture.

FLORICULTURE FOR NOVEMBER.

PREPARED BY JOHN FEAST, Florist, Baltimore.

By this time all tender plants should have been put away for winter—those very tender kinds should be put in the warmest part of the house—tropical plants will require a high temperature.—The arrangement of plants will be made according to the taste of those in charge; but to give a fine effect is to so arrange that every plant will show for itself—give plenty of space, and plants will thrive better than when crowded. Be careful that the plants, before putting them in, are free from all insects—this attended to will save much labor hereafter, and is a guarantee of health and good looks.

Dahlias should now be taken up—put in a dry place where the frost will not injure them.

Hyacinths should now be planted in pots, and also out of doors, for spring flowering.

Tulips, Crouses, and other balbs, that endure the winter, should be planted at this time.

*Oxalis*es and other greenhouse bulbs may now be re-potted.

Peonys—Set out these and separate the roots.

Amaryllis, Gladiolus, and *Tuberoses* should be taken up and put in a dry place.

Mignonnette—Sow in pots or boxes, for transplanting, when large enough.

Chrysanthemums, in pots, will require to be well watered, and neatly tied up for flowering.

Camelias—Re-pot if required, and be more sparing with water.

Azaleas—Should be moderately watered; and remove all bad looking foliage.

Geraniums—Re-pot such as need it, and be sparing of water until they begin to grow.

Cinerarias and *Calceolarias*—Remove these, as they need larger pots; keep them cool at this time of the year.

Callas—Give them the last shift for flowering.

Cyclamens.—Re-pot, and water moderately.

Carnations will need larger pots, especially the flowering plants; tie up to sticks neatly, and if a fresh stock is wanted cuttings may be now put in and propagated.

Cactuses—Be sparing of water through the fall months, for fear they should damp off. Plants of a soft, woody nature, for winter blooming, should be kept a little warm, as *Heliotropes, Plumbago, Ageratums, Aubutilous*, and others; keep them clean from insects by syringing frequently and fumigating. Plants in frames, as Violets, Primroses, Auriculas, Pinks, and Pansies, should have plenty of air at all times, if not too cold; close the sashes early, and have covers ready in case of a cold night.

Herbaceous Plants in the borders can be now removed, and set out, and the roots divided; at the same time fix the borders, instead of leaving off the work for spring; planting of shrubbery may be performed at this season; also Box Edging, as it is the best time of the year to meet with success.

Ladies Department.

A CHAT WITH THE LADIES FOR NOVEMBER.

BY FATUENCE PLANTER.

"In the stormy east-wind straining,
The pale yellow woods are waning,
The broad stream in its banks complaining,
Heavily the low sky raining."

LADIES:—I may be differently constituted from many others, but this season to me is pleasant. I love the Autumn. I love our balmy Indian Summer. I am carried back to my boyhood's bridal days, for I told my first love in Autumn, and my honey-moon was Autumn, hence I love it for its sweet associations of long ago bliss. I even love, too, the dark, cold, rainy November days—days reflective of my dark hours of present loneliness—when I can commune with myself, and feel that the very howling of the storm is surely that I am shut out for a little while from the busy, bustling world, and that *my thoughts* at least, are all my own, and not the common property of the tattling crowd. I love to see the tinted leaves as they drop from their parent stems; there is a soothing, sweet melancholy in all about us at this season, when the hectic flush of consumption paints the cheek of Nature. But you are ready perhaps to exclaim with the gifted Bryant, in his pensive strain—

"The melancholy days are come, the saddest of the year,
Of wailing winds and naked woods, and meadows brown
and sear.

Heaped in the hollows of the grove, the withered leaves lie
dead;

They tuck to the eddying gust, and to the rabbit's tread;
The robin and the wren are flown, and from the shrubs the
jay,

And from the wood top calls the crow, through all the
gloomy day.

Where are the flowers, the fair young flowers, that lately
sprung and stood,

In brighter light and softer airs, a beauteous sisterhood?
Alas! they are all in their graves—the gentle race of
flowers

Are lying in their lowly beds with the fair and good of
ours;

The rain is falling where they lie—but the cold November
rain

Calls not from out the gloomy earth the loved ones again."

I myself rather feel with Brainard, who, in allusion to the Indian Summer, so usual in this month, says:

"What is there saddening in the Autumn leaves?

Have they that green and yellow melancholy

That the sweet poet spoke of? Had he seen

Our variegated woods when first the fruit

Turns into beauty all October's charms—

When the dread fever quits us—when the storms

Of the wild Equinox, with all its wet,

Has left the land as the first deluge left it,

With a bright bow of many colors hung

Upon the forest tops—he had not signed."

As the reflective man or woman wends his or her way through the woods at this season amid the falling leaves, or over the fields covered with withered grass, which a few days since was green and growing, they naturally compare the rapid change in the vegetable kingdom, from life to death, with man's own estate, they are impressed with the beauty and truth of the scriptures that declare "man that is born of a woman hath but a short time to live, and is full of misery. He cometh up and is cut down like a flower: he fleeth as it were a shadow, and never can endure in one stay." He or she feels that

"Like leaves on trees, the race of man is found

Now green in youth, now withering on the ground;

Another race the following Spring supplies.

They fall successive and successive rise;

So generations in their course decay,

So flourish these, when those are passed away."

Such of you, my friends, as have not already got a Sewing Machine ought at once to procure one, and learn the girls, and boys too, to work it. By taking turns, it will employ profitably many dull winter hours that otherwise would be spent in idleness, if not in mischief, and by Spring you will be astonished what amount of work you have got through with. At small cost of sewing cotton, low priced clothing may be so ornamented with hems, tucks, stitching, embroidery, etc., as to look beautiful and appear rich and costly. The best, all things considered, is *Grover and Baker's Sewing Machine*; it has given for years great satisfaction in my family, and wherever it has been used since the late improvement, it is preferred to all others. Don't be forced to buy any sort that is offered by the importunate, insolent canvassers, who will insist upon leaving one for trial, and after a time make you keep it or pay for its use, or if you refuse to do either, vilify your character over the country. Such canvassers ought to be spurned the moment they broach the subject. It has become a nuisance, and ladies complain everywhere about these impudent sewing machine peddlers and colporteurs.

In forming dry walks around the dwelling, leading to the front door or in the flower plots, instead of the gravel walk or the unsightly brick pavements, I think a great improvement would be the substitution of Schillinger's Patent Artificial Stone. It is cheaper, more easily put down than either gravel or brick, and is more durable than marble and almost as beautiful. It is a plastic composition when put down, but becomes in a few hours hard as granite. All that is wanted is to prepare the bed for the path, then this plastic material is put on and covered with plank, when, in a day or two, the plank is removed and it has become hard and smooth and looks like polished mosaic marble-work of a skillful marble-cutter. It is a wonderful discovery. It is warranted to stand. It would make fine borderings for flower-beds, and be a safe barrier against moles, etc., that are so destructive to bulbs and certain flowers.

Those who desire to have an early display next year of finer flowers, should this month prepare beds and plant Hyacinths, Tulips, Snow Drops, Narcissus, Crocus, Iris, of different sorts, Crown Imperials, splendid Peonies, of various colors; all the Lilies, *Dielytra Spectabilis*, *Fritillarias*, *Geranium*, *Tuberosum*, *Gladiolus*, *Colville*, and *Byzantinum*, two of this class of plants that should be planted in Autumn. Above all, do not neglect those lovely unpretending beauties, the Violet and Lily of the Valley. Those who like the *Hydrangea* would do well to get the new Hardy *Hydrangea Deutzefolia*, brought to this country from Japan a few years ago. It stands the winter well out of doors and needs little or no protection. It is easily propagated—large white flowers—changing to pink.

Such of my readers who desire to make home bright and beautiful during the cheerlessness and cold of the next four months out of doors, will now prepare their *Wardian cases*, their glasses and *Terra Cotta Pots*, Vases and Hanging Baskets, for the parlor and the windows; fill them with such ornamental and winter blooming plants as may suit each one's fancy, after visiting some reliable Florist or making a selection from any one of the catalogues, gems in themselves, that are now issued by our most eminent Seedsmen and Floriculturists, and the hearts of the household and visitors will be gladdened by the secret pleasure afforded by the perfume and brilliant hues of the blooming flowers, when they compare the cold desolation and howling storm without with the seeming Summer and its sweets within, which adds a refined zest to every comfort and pleasure of home-life, to those in health, and oh! how much to the alleviation of the weariness of the invalid. Mothers and daughters, you have much in your power to render home pleasant, and cause those who have to battle with the storms of nature and the stripes of life to feel, as they enter after the day's labor is over, so happy as to exclaim, "Home, sweet home!"